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Fasc. I. to XII.—Volumes 175 to 184, being the Series for 1901, 1902, and 1903, complete Vol. I. of the Atlas.

A Title-page and Index for the above Fasciculi is now ready, and was issued with Fasciculus XIII.

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A Clinical Lecture
ON
AUTOMATIC FLUSHING OF THE STOMACH IN CERTAIN CASES OF VOMITING,

Delivered at St. George's Hospital,

BY SIR WILLIAM H. BENNETT, K.C.V.O., F.R.C.S. ENG.,
SENIOR SURGEON TO THE HOSPITAL.

GENTLEMEN,—In an address published in 1900[1] I dealt with some points connected with vomiting as met with in surgical work which seemed to me to be of interest. What I have to say to-day is the outcome of further experience in the same direction and may be taken for practical purposes as a sequel to the observations I then made.

Speaking generally it will, I am sure, be found that an honest respect for traditional methods of treatment is worthy to be encouraged, but a respect of this kind is quite different from the slavish adherence to manners and methods which, at all events in many cases, if not harmful, are useless and ought rapidly to become obsolete. This observation applies with singular aptness to the treatment of certain forms of vomiting not uncommon in ordinary clinical work, which is prone to occur in many abdominal cases, with and without operation, in which, for some reason or other, the normal functions of the intestines are so disturbed that frequent rejections of the stomach contents take place. Such vomiting may be met with in intestinal obstruction, in true peritonitis, in the pseudo-peritonitis following certain abdominal operations and injuries, and other conditions of a like nature which I need not detail. The traditional method of treatment in cases of this kind is to abstain as far as possible from giving the patients anything by the mouth in the way of liquid, upon the assumption that the less fluid there is in the stomach the less the stomach will tend to reject its contents and so the less will be the tendency to vomiting, the offensive character of the stomach contents as a factor in the production of vomiting being ignored. This is a pretty generally accepted method in the schools. Now, in all patients suffering from this distressing condition the great misery complained of is the intense thirst, because, as can readily be understood, the frequent ejection of fluid from the stomach in excess of that which is put into it must very rapidly lead to a general drying up of the body moisture and so engender a thirst of the most painful type. To obviate this intense discomfort—I mean the discomfort of thirst—attempts have been made by the use of large injections of water into the bowel, but more commonly simply by the giving through the mouth of very small quantities of fluid, either hot water in sips, or certainly not in larger quantities at one time than a tablespoonful, or by the administration of very small pieces of ice which are allowed to dissolve on the tongue. The first of these methods does to some extent, although not completely, tend to assuage thirst but it does not alter the character of the vomit, a most important point. The remaining two plans may be set aside as of little account in the assuaging of thirst as their effect is practically *nil*, mainly because the abstraction of fluid from the body generally by the ejections from the stomach is so far in excess of the fluid added by these methods that it must be clear to the meanest comprehension that no relief to thirst worth mentioning can possibly be achieved by them. Vomiting of this type, even supposing that there is not intestinal obstruction, is a very serious condition, and as a matter of fact a certain percentage of patients who reach the period of the "stinking vomit," which, although very frequently called stercoraceous,[2] that is to say containing fæcal material, is not always so, die not from the disease which produces the vomiting, but from the exhaustion, distress, and disgusting effect of the process of vomiting such offensive material. Obviously, therefore, some means should be sought by which this vomiting can either be arrested or the vomit be so altered in its composition as to be less offensive, so that the disgust engendered by its occurrence can be avoided. The question then arises how is this to be brought about. The matter is not difficult, although I must confess to having learnt it from a patient who took the treatment of his case into his own hands, against the advice of his medical attendants, of whom I was one. It consists, in fact, instead of restricting the amount of fluid given, of allowing the patient to drink as much as he chooses of ordinary cold or tepid water or some other perfectly unirritating fluid. As the thirst in the first instance is the main thing to be obviated, plain water is the best, because it is more quickly absorbed than any other liquid. The effect of the administration of water in this way in cases of the kind is really to bring about a very frequent automatic washing out of the stomach and it will be found by the time the patient has taken, say, a pint or one and a half pints of water, which he will greedily do, that the vomit, although occurring quite as frequently as, or perhaps more frequently to begin with than, before, becomes clear; it loses its smell, the offensive taste is gone, and the patient's disgust is entirely removed. In such a case it is a revelation to watch the change that comes over a patient's countenance as he is allowed to quench his thirst and as the vomiting, after taking free libations of water, becomes inoffensive to the taste and smell. The look of disgust and distress which is such a notable characteristic in the ordinary circumstances, is replaced, as the stomach is cleansed each time the vomiting of the recently swallowed water occurs, by a look of contentment and repose which is hardly credible unless it has been actually seen. This method, of course, as I have already hinted, is entirely contrary to orthodox methods but, as I have also said, it is necessary from time to time to reconsider our position with regard to orthodox teachings, because there is no doubt that in many cases tradition—we might almost say superstition—lends such an importance to some old-fashioned methods that they are adhered to with a blind confidence which is not particularly creditable to the intelligence of those who follow them.[3]

CLINICAL EXAMPLES.

The following cases should afford enough clinical evidence of the correctness of the foregoing observations.

CASE 1.—A man, about 68 years of age, of strong physique, developed evidences of partial intestinal obstruction of a chronic kind which finally led to an exploratory operation being made, with the result that there was found an apparently malignant mass involving the large intestine, dragging also into itself a knuckle of the ileum. A number of secondary masses were scattered about the abdomen and the disease was clearly so extensive in its distribution that no good whatever could be done by an extension of the operation, more particularly as it appeared very doubtful whether a condition of complete obstruction would finally accrue although it was possible that it might do so. In these circumstances nothing was done with the local condition; the abdominal wound was closed, and the patient was told as candidly as possible what the state of affairs was. Within three or four days of the operation an increased obstruction ensued and vomiting commenced. This in the usual course was followed by the intense thirst I have referred to; by degrees the vomit became stinking, containing sometimes a little blood, the result of the straining; and the taste, as the patient said, was something horrible. From being a comparatively robust looking person at the onset of the vomiting, in three or four days he was an emaciated, miserable-looking object who was only "longing to die to escape," as he said, "from this horrible thirst and taste and stink." Those were his own words. Up to that time he had been treated in the orthodox way, with the restriction of fluid in the manner that I have mentioned earlier in this lecture. At last the thirst became so terrible that the patient said, as he was going to die, or felt that he was going to die, he would prefer to quench his thirst, even if it made him vomit more; he therefore not only begged but insisted upon having as much water to drink as he wanted. Seeing the desperate condition in which he seemed to be, and seeing the confidence that he felt of being more comfortable if he wer

[1] On Vomiting, considered from some of its surgical aspects, especially with reference to a feculent vomit which is sometimes curative, Brit. Med. Jour., March 24th, 1900.

[2] When really stercoraceous, vomiting is in itself occasionally curative: see address above referred to.

[3] In order to economise space some purely elementary points appropriately included in the lecture as delivered are omitted here.—W. H. B.

allowed to follow this plan I acquiesced and we allowed him to have by his bedside a glass of water, which was continually filled as fast as he chose to drink it. The amount of fluid taken in the first two or three hours was very large and of course the vomiting was frequent. But, as I have already mentioned, very rapidly the rejected contents of the stomach, instead of being dark and fil-smelling, became clear, there was no effort involved in the vomiting, and the water which he drank, after resting for a certain time in his stomach, regurgitated from his mouth, upon which he almost immediately took some more water in the ordinary way. Before he had been on this line of treatment a few hours the thirst had entirely disappeared and he "thanked God" for the comfort which followed. By degrees the vomiting became less and at the end of the third day from the commencement of this treatment, instead of being dead, as appeared likely at the commencement, he was manifestly getting better, and as a matter of fact his bowels resumed their normal functions for a period; he lived for some time, taking free libations of water, and latterly taking a little liquid food, vomiting about once in 24 hours only, and being in perfect comfort. Finally, he died from exhaustion, comfortably, in quietude, and without distress. Now, if you think for a moment, if by chance any of you happen to have seen a man dying from intestinal obstruction, of the contrast between one dying in the way that this man did and the way in which people similarly circumstanced generally die—the stinking vomit coming from the mouth and nose and creating a horrible disgust which is quite indescribable—you will see at least that if in this particular instance the treatment did not finally save the patient's life, it certainly prolonged it and insured a peaceful end—a matter of no small moment.

CASE 2.—The next case is even more instructive. The patient was a man in the FitzWilliam ward, about 45 years of age, who had a very large irreducible hernia, which proved at the operation to be for the greater part omental. The amount of omentum which had to be removed, as it was almost all adherent, was very large, weighing something like a pound, and, as I have often pointed out here and elsewhere,[4] when large masses of recent, that is to say, normal, omentum are ligatured, you are liable to find symptoms arise during the first 48 hours after the operation which are indistinguishable from those of strangulation of the bowel, and in cases of this kind, in which a hernia has been operated upon, I have known the wound to be opened up. In fact, the abdomen has been opened on the supposition that there has been recurrent strangulation when the symptoms were simply due to a tightly ligatured omental mass which, if left alone, generally ceases to cause irritation and the patient as a rule gets well. In this particular instance these symptoms followed and they were, I think, the worst of the kind I have ever seen, because within 48 hours of the operation the abdomen was distended to a great degree and there was vomiting of material which my house surgeon called stercoraceous and which certainly was stinking and very offensive whilst the patient looked like a man who was dying. He had, up to the time of my seeing him, which was about 24 hours after the onset of these symptoms, been treated in the orthodox manner to which I have referred. As soon as I saw him in this condition I ordered him to have any amount of water to drink. He very soon took advantage of the permission and drank large quantities, as patients suffering in this way do, although they vomit at first almost as soon as the fluid passes into the stomach. The result was, as in the case which I have already described, that very rapidly the stinking character of the vomit disappeared and there was simply ejected from the stomach at intervals clear water without effort and without discomfort. An almost immediate change in the patient's aspect commenced to show itself and, after a free action of the bowels, which could not previously be brought about, had been obtained by the use of enemata, he recovered. I believe I am right in saying that there is not the least doubt that had the orthodox treatment been here used this man would have died, and died very shortly, from the effect of this fœtid vomiting occurring in the manner in which it does in such cases. That is an example, then, in which a departure from the orthodox treatment, I have no doubt, saved the patient's life.

CASE 3.—The same result followed in this instance, the patient being a child, aged 13 years, upon whom I operated for appendicitis—a subacute appendicitis of the worst kind, one of the most difficult operations I have had to perform, I think, for the removal of the appendix; in fact, it was a question at one time whether it would not be wiser to give up the attempt. We persevered, however, and finally removed the diseased mass, hoping that things would go well. Precisely the same state of affairs occurred in this child within 12 hours of the operation as happened in the foregoing case of the man. No doubt the child developed peritonitis, which was not remarkable considering the difficulties of the case, there having been an abscess as well as some sloughing tissue to be dealt with. The vomiting came on in the same way as in the other cases and all the child begged was that she might have something to quench her thirst—the universal cry of all these patients. Fortified by my previous experience I gave the child as much water as she cared to take; and she took it by the pint. The same sequence of events followed. The vomit cleared, the attempts at vomiting were quite effortless, the ejection became nothing more than a mechanical regurgitation, the distressed look on the face disappeared in a few hours, and the child recovered, which I do not believe for a moment she would have done if she had been treated on the orthodox principle.

CASE 4.—This is another equally striking example. A middle-aged man, of a strongly alcoholic temperament, received a blow upon the abdomen which caused slight discomfort only at the moment. On the following day "cramps in the stomach" began to occur with distressing and increasing frequency. Vomiting soon set in and before long assumed the stinking type. The abdomen became distended and tender and the aspect of the case seemed grave. Operative measures were considered but were declined on the ground that recovery could not be guaranteed. Under the orthodox treatment by deprivation of fluid by the mouth the thirst became intense and the patient seemed to be rapidly getting exhausted. Free libations of cold water upon the lines indicated were taken. The vomit quickly became clear and inoffensive, the thirst disappeared, the foully coated tongue cleaned, whilst the patient's general condition improved with singular steadiness. For 24 hours vomiting of clear water followed the free libations and then by degrees passed off. I have no doubt that the plan adopted saved the patient's life. What the pathological condition present was I cannot say, but it had all the clinical characters of peritonitis.

These four cases suffice, although I could quote others, to show the advantage of adopting the plan which I advise you to use in the circumstances. Of course, in doing so it must be remembered that you are running counter to the orthodox teachings, you must therefore be prepared to have exception taken to the method. But if by adopting a method of this kind you are merely able to make a dying patient more comfortable by relieving the terrible thirst as well as the distress and disgust which are engendered by this vomiting, that in itself is sufficient to justify your attitude. And further, if it is possible, as I have not the least doubt it is, as I have been able to show in some of the cases which I have mentioned, actually to save life by the proceeding, a departure from the ancient method is not only fully justified but becomes a mere matter of duty under the conditions which I have described.

[4] Clinical Lectures on Abdominal Hernia.

PLUMBING IN RELATION TO HEALTH.—One of the most important factors in domestic hygiene is the avoidance of structural defects in the dwelling house. These may be of many kinds but the most serious are deficient admission of air and light, dampness, and improper or defective drainage. With the modern system of water carriage of excreta the entrance of sewer air into a house is an evil to be dreaded and for its exclusion the householder must rely almost entirely on the goodness of the plumber's work. In an address delivered on May 30th at a public meeting in Bristol on Plumbing in Relation to Health Dr. D. S. Davies, medical officer of health of the city, said that 20 years ago it was often assumed that drainage defects were responsible for the spread of the majority of the communicable fevers. Later experience had modified that view and had reduced the number of specific diseases capable of propagation in this way, but it was none the less true that grave injury to the general health resulted from inattention or ignorance in carrying out the practical details of plumbing work. The registration of plumbers was therefore desirable and there was great need for able, careful, and guaranteed workmanship.

AN ANALYSIS OF 300 CONSECUTIVE GYNÆCOLOGICAL LAPAROTOMIES.[1]

BY ARTHUR H. N. LEWERS, M.D. LOND., F.R.C.P. LOND.,
OBSTETRIC PHYSICIAN TO THE LONDON HOSPITAL.

PART I.

THE cases dealt with in this paper are all the cases of abdominal section performed by me between April 3rd, 1901, and Oct. 14th, 1904. They extend, therefore, over a period of three years and six months, but may be more correctly referred to a period of three years and four months, as the date of the penultimate case in the list is August 12th, 1904, after which I was away for two months. Allowing for holidays in the other years the cases may be considered with some approach to accuracy as representing three years' work—an average of 100 cases a year. The cases, however, are not evenly distributed over the period of time under review. Since June, 1903, when I succeeded to the senior post in my department at the London Hospital, down to the date of the 300th case in the list (Oct. 14th, 1904), I performed abdominal section 160 times, thus leaving only 140 cases belonging to the previous two years.

The cases are tabulated consecutively in chronological order as they occurred. The plan that has usually been adopted of publishing separately a large series of ovariotomies, abdominal hysterectomies for fibroids, and so on, appears open to criticism. It is apt to lead to the exclusion of most of the fatal cases; at all events it would have had this effect if applied to the present series. In classifying the cases in my table I have several times been struck with the difficulty of deciding into which class a particular case should go. No doubt in the majority of the cases it is easy to come to a right decision. An ovariotomy, of course, goes into the list of ovariotomies and an abdominal hysterectomy for fibroids into the list of cases with that heading. But what is to be done when a case occurs in which both these operations have been performed at the same time on the same patient? In operations for the removal of the uterine appendages the same difficulty occurs. Not rarely on one side or the other the ovary shows more or less definitely cystic degeneration. Suppose there is single or double pyosalpinx present and that on one side there is a cystic ovary, for example, of the size of an orange, how should the operation be classified? Is it an ovariotomy or an operation for the removal of inflamed appendages? It is scarcely fair to call it an ovariotomy since nearly all the danger of the operation is due to the condition of the tubes. Without dwelling further on this point I think most of us will agree that, as regards gynæcological work, the only satisfactory course is for an operator to publish his cases of abdominal section in consecutive series as they occurred, and at the same time to publish a sufficiently large number to eliminate the chance that a particular run of cases may have happened to be unusually favourable.

The cases in my paper are classified under the following groups. 1. *Ovariotomy.*—By this is meant the complete removal of an ovarian tumour, cystic or solid, and in this group are included operations for the removal of cysts of the broad ligament and tubo-ovarian cysts. Cases in which hysterectomy for any reason has been performed are placed in a separate category. 2. *Abdominal hysterectomy for fibroids, including panhysterectomy.*—In the great majority of the operations for fibroids the operation adopted was the supravaginal amputation of the body of the uterus, leaving more or less of the cervix as a stump. Cases in which an ovarian tumour has been removed at the same time have been placed in this class. 3. *Removal of inflamed uterine appendages.*—In this group are placed the cases in which the pathological condition of the Fallopian tubes appeared to be the chief morbid factor present. This group includes cases in which a more or less definitely cystic ovary was removed as well as the diseased tubes. 4. *Abdominal section for ectopic pregnancy.* 5. *Abdominal hysterectomy for conditions other than fibroids.*—In this group are included cases where the uterus has been removed for hæmatometra, carcinoma of the body of the uterus, or as an incident in an ovariotomy or operation for pyosalpinx. 6. *Exploratory laparotomy.* 7. *Cæsarean section.*—Some objection may be made to including these cases in a list of gynæcological abdominal sections. But, to make the list of cases in which I have opened the abdomen during a particular period strictly consecutive, I have thought it better to include cases of Cæsarean section, as well as laparotomies for ectopic pregnancy, to the inclusion of which similar objections apply. 8. *Myomectomy.* 9. *Hysteropexy.*

1. *Ovariotomy.*—An analysis of the cases here tabulated shows that there were exactly 100 ovariotomies in the 300 cases under consideration, a fact of which I may say I was unaware till the analysis was made. Among these 100 ovariotomies there was no mortality, nor any incomplete operation. The numbers of these cases in the table are: 1, 3, 4, 8, 10, 14, 26, 30, 32, 33, 42, 43, 45, 52, 55, 59, 60, 66, 69, 70, 73, 78, 80, 82, 84, 95, 96, 99, 105, 114, 115, 116, 118, 119, 124, 129, 131, 132, 133, 135, 137, 138, 140, 145, 146, 157, 159, 170, 171, 173, 175, 179, 181, 182, 184, 192, 196, 200, 201, 202, 203, 206, 210, 215, 217, 219, 221, 225, 229, 230, 231, 232, 233, 239, 243, 244, 245, 249, 250, 254, 255, 257, 261, 262, 264, 268, 269, 273, 274, 275, 276, 277, 285, 287, 288, 293, 294, 296, 297, and 298 = 100. In 29 of these cases the disease was bilateral (Nos. 8, 14, 30, 32, 45, 52, 60, 78, 95, 96, 105, 115, 131, 135, 138, 140, 145, 157, 159, 175, 192, 196, 206, 215, 217, 261, 273, 274, and 294). The pedicle was twisted in 18 cases (Nos. 43, 59, 69, 70, 78, 82, 116, 131, 145, 173, 184, 192, 219, 245, 255, 274, 293, and 296). The cyst was suppurating in nine cases (Nos. 14, 124, 146, 203, 210, 239, 244, 268, and 275). In one case (No. 30) there was a double uterus. In one case (No. 55) the patient had a carotid aneurysm. In seven cases the tumour was a dermoid (Nos. 69, 140, 202, 225, 230, 232, and 274). Enucleation was required in ten cases (Nos. 73, 105, 118, 119, 124, 135, 159, 171, 181, and 250). In three cases (Nos. 82, 184, and 261) the patient was pregnant at the time of the operation; in two of these a miscarriage occurred soon afterwards. In one of these cases (No. 261) it is interesting to note that both ovaries were cystic, forming tumours of the size of a child's head one year old. The patient was four and a half months pregnant at the time of the operation and it was only 13 months since her last confinement at term. In two cases (Nos. 129 and 179) the ovarian tumour was a fibroid. The ureter was seen in the course of separating the cyst in seven cases (Nos. 135, 171, 181, 244, 250, 275, and 285). In one case (No. 275) the operation was to remove the rest of an ovarian tumour left by another operator four years previously. Drainage was employed in nine cases (Nos. 1, 73, 105, 118, 137, 239, 250, 268, and 275). In one case (No. 1) Keith's tube was used and in all the others drainage by gauze was adopted.

II. *Abdominal hysterectomy for fibroids.*—In this class there are 73 cases with four deaths, a mortality of 5·4 per cent. In two of the fatal cases death was due to intestinal obstruction—in one of these (No. 40) caused by a coil of small intestine adhering to the seam across the floor of the pelvis; in the other case (No. 61) caused by a coil of intestine passing through a hole in the omentum about a month after the operation. As these are the only cases of abdominal section in which intestinal obstruction has occurred in the whole of my experience, the accident must be a very rare one. I think, however, that *a priori* there is more risk of it after abdominal hysterectomy for fibroids than in other gynæcological laparotomies. The removal of the uterus obviously leaves a vacancy in the pelvis that does not occur after ovariotomy, so that intestine must necessarily more readily occupy the pelvis after hysterectomy. Probably, however, this factor is not the only one, and the accident is more likely when there is a specially long mesentery. Since the occurrence of these two cases I always try to draw the omentum down over the intestines, so as to have, if possible, the omentum intervening between them and the seam over the stump. At the same time apertures in the omentum can be recognised and closed. In one case (No. 58) death was due to shock in three days' time in an extremely anæmic woman, aged 51 years. This patient had for some years been advised against operation but she had continued to grow weaker and weaker till finally it was felt that operation was her only chance. This case, in fact, indicates what may be called the mortality of expectant treatment. She ought to have been operated on before her condition became so unfavourable. In one case (No. 166) one part of the growth had extended under the peritoneum, raising it from the left iliac fossa, so that extensive enucleation was necessary. This patient died from sepsis due, I

[1] A paper read before the Medical Society of London on Feb. 27th, 1905.

TABLE GIVING PARTICULARS OF 300 CONSECUTIVE LAPAROTOMIES.

No.	Age.	Married or single.	Number of children.	Number of miscarriages.	Nature or cause of operation.	Date of operation.	Drainage.	Result.*
1	32	M.	3	0	Ovariotomy (left).	April 3rd, 1901.	Keith's tube.	R.
2	39	M.	5	0	Appendages removed.	April 27th, 1901.	No.	R.
3	49	M.	0	2	Ovariotomy.	May 2nd, 1901.	No.	R.
4	25	M.	5	1	Ovariotomy.	May 6th, 1901.	No.	R.
5	33	S.	—	—	Abdominal hysterectomy.	May 11th, 1901.	Keith's tube.	R.
6	46	M.	7	2	Abdominal hysterectomy.	June 6th, 1901.	Gauze through abdominal wound and vagina.	D.
7	—	S.	—	—	Appendages removed.	June 12th, 1901.	No.	R.
8	30	M.	2	0	Double ovariotomy.	June 13th, 1901.	No.	R.
9	49	S.	—	—	Abdominal hysterectomy.	June 16th, 1901.	Keith's tube.	R.
10	45	M.	3	0	Double ovariotomy.	June 20th, 1901.	No.	R.
11	34	—	—	—	Appendages removed.	July, 1901.	No.	R.
12	46	M.	4	2	Exploratory laparotomy.	July 18th, 1901.	Gauze.	R.
13	46	S.	—	—	Abdominal hysterectomy.	August 22nd, 1901.	No.	R.
14	28	—	—	—	Double ovariotomy.	August 26th, 1901.	No.	R.
15	35	S.	—	—	Panhysterectomy and ovariotomy.	August 29th, 1901.	Gauze per vaginam.	R.
16	34	—	—	—	Ectopic pregnancy.	Sept. 2nd, 1901.	Keith's tube.	R.
17	39	M.	0	0	Abdominal hysterectomy.	Sept. 3rd, 1901.	No.	R.
18	45	M.	5	0	Ovariotomy and hysterectomy.	Sept. 6th, 1901.	Gauze and Keith's tube	R.
19	27	M.	2	0	Ectopic pregnancy.	Sept. 6th, 1901.	—	R.
20	47	S.	—	—	Abdominal hysterectomy.	Sept. 9th, 1901.	No.	R.
21	—	M.	—	—	Exploratory laparotomy.	Sept. 10th, 1901.	No.	R.
22	27	S.	—	—	Hysterectomy and ovariotomy.	Oct. 8th, 1901.	No.	R.
23	45	M.	0	0	Hysterectomy and ovariotomy	Oct. 10th, 1901.	Gauze and Keith's tube.	R.
24	56	M.	6	2	Panhysterectomy	Oct. 14th, 1901.	Gauze in vagina.	R.
25	38	M.	1	0	Appendages removed.	Oct. 24th, 1901.	No.	R.
26	27	M.	3	1	Ovarian cyst and dilated tube.	Nov. 11th, 1901.	No	R.
27	44	M.	0	0	Abdominal hysterectomy.	Nov. 18th, 1901.	No.	R.
28	31	M.	1	0	Appendages removed.	Nov. 25th, 1901.	Keith's tube and gauze.	R.
29	39	M.	8	2	Ectopic pregnancy.	Nov. 26th, 1901.	Gauze.	D.
30	24	M.	0	0	Double ovariotomy.	Dec. 5th, 1901.	No.	R.
31	49	M.	8	2	Abdominal hysterectomy.	Dec. 9th, 1901.	No.	R.
32	26	M.	0	0	Double ovariotomy.	Dec. 11th, 1901.	No.	R.
33	68	M.	0	0	Ovariotomy.	Dec. 16th, 1901.	No.	R.
34	38	M.	0	0	Appendages removed.	Jan. 1st, 1902.	No.	R.
35	28	M.	1	0	Ectopic pregnancy.	Jan. 9th, 1902.	No.	R.
36	39	M.	1	4	Appendages removed.	Jan. 13th, 1902.	No.	R.
37	39	M.	0	1	Abdominal hysterectomy.	Jan. 20th, 1902.	No.	R.
38	29	M.	3	0	Appendages removed.	Jan. 23rd, 1902.	No.	R.
39	38	M.	4	0	Appendages removed.	Jan. 30th, 1902.	No.	R.
40	38	M.	0	0	Abdominal hysterectomy.	Feb. 3rd, 1902.	No.	D.
41	44	M.	0	0	Abdominal hysterectomy.	Feb. 6th, 1902.	No.	R.
42	48	S.	—	—	Ovariotomy (left).	Feb. 11th, 1902.	No.	R.
43	29	M.	3	0	Ovariotomy (right).	Feb. 13th, 1902.	No.	R.
44	29	M.	2	0	Ectopic pregnancy.	March 8th, 1902.	No.	R.
45	33	M.	3	1	Double ovariotomy.	March 13th, 1902.	No.	R.
46	45	S.	—	—	Hysterectomy and ovariotomy.	March 14th, 1902.	No.	R.
47	46	M.	2	—	Abdominal hysterectomy.	March 15th, 1902.	No.	R.
48	30†	S.	—	—	Myomectomy.	March 22nd, 1902.	No.	R.
49	—	M.	0	0	Ectopic pregnancy.	March 26th, 1902.	No.	R.
50	33	M.	3	—	Appendages removed.	April 9th, 1902.	No.	R.
51	30	M.	2	—	Appendages removed.	April 16th, 1902.	No.	R.
52	37	M.	—	—	Double ovariotomy.	April 21st, 1902.	No.	R.
53	45	M.	8	3	Hysterectomy and ovariotomy.	April 22nd, 1902.	No.	R.
54	62	M.	—	—	Panhysterectomy	May 1st, 1902.	Gauze in vagina.	D.
55	48	M.	1	0	Ovariotomy (left).	May 2nd, 1902.	No.	R.
56	43	M.	12	0	Ovariotomy and hysterectomy.	May 5th, 1902.	Gauze.	R.
57	28	M.	3	0	Ectopic pregnancy and ovariotomy.	May 15th, 1902.	No.	R.
58	51	S.	—	—	Abdominal hysterectomy.	May 17th, 1902.	No.	D.
59	41	M.	6	3	Ovariotomy (left).	May 19th, 1902.	No.	R.
60	31	M.	0	0	Double ovariotomy.	May 22nd, 1902.	No.	R.
61	35	S.	—	—	Abdominal hysterectomy.	June 2nd, 1902.	No.	D.
62	42	S.	—	—	Abdominal hysterectomy.	June 5th, 1902.	Gauze.	R.
63	42	M.	—	—	Cæsarean section.	June 10th, 1902.	No.	R.
64	29	S.	—	—	Abdominal hysterectomy.	June 12th, 1902.	No.	R.
65	32	M.	1	0	Appendages removed.	June 16th, 1902.	No.	R.
66	77½	M.	0	0	Ovariotomy (left).	June 16th, 1902.	No.	R.
67	—	M.	0	0	Double pyosalpinx.	June 18th, 1902.	Gauze.	R.
68	49	M.	4	1	Abdominal hysterectomy.	June 24th, 1902.	No.	R.
69	45	M.	1	0	Ovariotomy (right).	July 3rd, 1902.	No.	R.
70	35	M.	1	0	Ovariotomy (right).	July 3rd, 1902.	No.	R.
71	41	M.	0	0	Abdominal hysterectomy.	August 4th, 1902.	No.	R.

* R = recovery; D = death.

* R = recovery; D = death. † About.

TABLE GIVING PARTICULARS OF 300 CONSECUTIVE LAPAROTOMIES—(*Continued*).

No.	Age.	Married or single.	Number of children.	Number of miscarriages.	Nature or cause of operation.	Date of operation.	Drainage.	Result.*
72	22	S.	—	—	Appendages removed.	August 7th, 1902.	No.	R.
73	36	M.	1	1	Tubo-ovarian cyst.	August 8th, 1902.	Gauze.	R.
74	37	M.	4	0	Ovary and tube removed.	August 14th, 1902.	No.	R.
75	—	M.	—	—	Appendages removed.	August 18th, 1902.	Gauze.	D.
76	31	M.	0	1	Appendages removed.	August 21st, 1902.	No.	R.
77	32	M.	0	0	Abdominal hysterectomy.	Sept. 11th, 1902.	No.	R.
78	31	M.	5	1	Ovariotomy (double).	Sept. 13th, 1902.	No.	R.
79	55	S.	—	—	Panhysterectomy	Sept. 15th, 1902.	Gauze through vagina.	R.
80	41	M.	8	0	Ovariotomy (left).	Sept. 18th, 1902.	No.	R.
81	52	S.	—	—	Abdominal hysterectomy.	Sept. 18th, 1902.	No.	R.
82	25	M.	1	0	Ovariotomy (right).	Sept. 23rd, 1902.	No.	R.
83	39	M.	2	3	Ectopic pregnancy.	Sept. 27th, 1902.	No.	R.
84	32	M.	2	?	Ovarian tumour and appendages removed.	Oct. 7th, 1902.	No.	R.
85	37	S.	—	—	Double pyosalpinx.	Oct. 9th, 1902.	No.	R.
86	63	M.	0	0	Panhysterectomy	Oct. 20th, 1902.	Gauze in vagina.	D.
87	36	M.	2	0	Hysterectomy and ovariotomy.	Oct. 30th, 1902.	No.	R.
88	37	S.	—	—	Appendages removed.	Nov. 6th, 1902.	No.	R.
89	35	M.	0	0	Cæsarean section.	Nov. 8th, 1902.	No.	R.
90	36	S.	—	—	Double pyosalpinx.	Nov. 24th, 1902.	Gauze.	R.
91	29	M.	0	0	Ectopic pregnancy.	Nov. 25th, 1902.	No.	R.
92	43	S.	—	—	Panhysterectomy	Nov. 27th, 1902.	Gauze in vagina.	R.
93	28	M.	0	0	Double pyosalpinx.	Dec. 4th, 1902.	Gauze.	R.
94	29	M.	1	2	Ectopic pregnancy.	Dec. 8th, 1902.	No.	R.
95	44	M.	4	—	Double ovariotomy.	Dec. 9th, 1902.	No.	R.
96	35	S.	—	—	Double ovariotomy.	Dec. 11th, 1902.	No.	R.
97	43	M.	1	1	Abdominal hysterectomy.	Dec. 18th, 1902.	No.	R.
98	48	M.	0	3	Appendages removed and hysterectomy.	Dec. 22nd, 1902.	—	R.
99	56	M.	4	0	Ovariotomy (right).	Jan. 1st, 1903.	No.	R.
100	22	M.	0	0	Ectopic pregnancy.	Jan. 3rd, 1903.	No.	R.
101	26	—	—	—	Inflamed appendages.	Jan. 4th, 1903.	Gauze.	R.
102	23	S.	—	—	Appendages removed.	Jan. 5th, 1903.	No.	R.
103	27	M.	1	0	Appendages removed.	Jan. 12th, 1903.	No.	R.
104	36	M.	1	0	Appendages removed.	Jan. 15th, 1903.	No.	R.
105	44	W.‡	4	4	Double ovariotomy.	Jan. 21st, 1903.	Gauze.	R.
106	45	S.	—	—	Abdominal hysterectomy.	Jan. 22nd, 1903.	No.	R.
107	23	M.	—	—	Exploratory laparotomy.	Jan. 25th, 1903.	No.	D.
108	26	M.	1	0	Ectopic pregnancy.	Jan. 26th, 1903.	No.	R.
109	43	M.	0	0	Abdominal hysterectomy.	Feb. 3rd, 1903.	No.	R.
110	35	M.	2	0	Appendages removed.	Feb. 5th, 1903.	No.	R.
111	—	M.	0	0	Appendages removed.	Feb. 7th, 1903.	No.	R.
112	37	—	—	—	Tubal abortion.	Feb. 11th, 1903.	No.	R.
113	56	S.	—	—	Abdominal panhysterectomy.	Feb. 19th, 1903.	Gauze in vagina.	R.
114	66	S.	—	—	Ovariotomy (right).	Feb. 25th, 1903.	No.	R.
115	28	M.	3	0	Double ovariotomy.	March 9th, 1903.	No.	R.
116	—	M.	—	—	Ovariotomy (right).	March 9th, 1903.	No.	R.
117	25	M.	—	—	Cæsarean section.	March 12th, 1903.	No.	R.
118	50	—	—	—	Ovariotomy (left).	March 12th, 1903.	Gauze.	R.
119	38	—	—	—	Tubo-ovarian cyst on each side.	March 16th, 1903.	No.	R.
120	46	—	—	—	Exploratory laparotomy.	March 16th, 1903.	Gauze.	R.
121	37	M.	—	—	Appendages removed.	March 17th, 1903.	No.	R.
122	—	—	—	—	Exploratory laparotomy.	March 19th, 1903.	No.	R.
123	53	S.	—	—	Abdominal hysterectomy.	March 26th, 1903.	No.	R.
124	46	M.	6	1	Ovariotomy (right).	March 31st, 1903.	No.	R.
125	37	M.	1	3	Appendages removed.	April 3rd, 1903.	No.	R.
126	35	M.	1	0	Abdominal hysterectomy.	April 11th, 1903.	No.	R.
127	—	S.	—	—	Abdominal hysterectomy.	April 16th, 1903.	Gauze in vagina.	R.
128	38	S.	—	—	Abdominal hysterectomy.	April 18th, 1903.	No.	R.
129	35	M.	3	0	Ovariotomy (right).	April 20th, 1903.	No.	R.
130	33	M.	4	—	Abdominal hysterectomy.	April 30th, 1903.	No.	R.
131	33	M.	7	—	Ovariotomy (double).	May 4th, 1903.	No.	R.
132	39	M.	—	—	Ovariotomy (left).	May 7th, 1903.	No.	R.
133	34	M.	0	0	Ovariotomy (left).	May 11th, 1903.	No.	R.
134	37	M.	1	0	Ectopic pregnancy.	May 11th, 1903.	No.	R.
135	50	M.	0	0	Double ovariotomy.	May 25th, 1903.	No.	R.
136	49	S.	—	—	Abdominal hysterectomy.	May 27th, 1903.	No.	R.
137	31	M.	—	—	Ovarian tumour and appendages removed.	June 3rd, 1903.	Gauze.	R.
138	28	S.	—	—	Double ovariotomy.	June 6th, 1903.	No.	R.
139	52	S.	—	—	Abdominal panhysterectomy.	June 9th, 1903.	Gauze per vaginam.	R.
140	42	S.	—	—	Double ovariotomy.	June 10th, 1903.	No.	R.
141	43	S.	—	—	Abdominal hysterectomy.	June 16th, 1903.	No.	R.
142	42	S.	—	—	Abdominal hysterectomy.	June 18th, 1903.	No.	R.

* R = recovery; D = death. ‡ Widow.

* R = recovery; D = death.

TABLE GIVING PARTICULARS OF 300 CONSECUTIVE LAPAROTOMIES—(*Continued*).

No.	Age.	Married or single.	Number of children.	Number of miscarriages.	Nature or cause of operation.	Date of operation.	Drainage.	Result.*
143	50	M.	—	—	Abdominal hysterectomy.	June 19th, 1903.	No.	R.
144	48	M.	5	?	Abdominal hysterectomy.	June 25th, 1903.	No.	R.
145	37	M.	1	2	Double ovariotomy.	July 2nd, 1903.	No.	R.
146	34	M.	0	0	Ovariotomy (right).	July 2nd, 1903.	No.	R.
147	41	M.	3	0	Abdominal hysterectomy.	July 9th, 1903.	No.	R.
148	50	S.	—	—	Abdominal hysterectomy.	July 9th, 1903.	No.	R.
149	23	S.	—	—	Ectopic pregnancy.	July 9th, 1903.	No.	R.
150	34	S.	—	—	Hysterectomy and ovariotomy.	July 10th, 1903.	No.	R.
151	35	M.	1	1	Appendages removed.	July 10th, 1903.	No.	R.
152	45	M.	5	0	Hysterectomy and appendages removed.	July 16th, 1903.	No.	R.
153	28	M.	1	—	Cæsarean section.	July 19th, 1903.	No.	R.
154	38	M.	0	0	Abdominal hysterectomy.	uly 21st, 1903.	No.	R.
155	32	M.	2	1	Appendages removed.	July 24th, 1903.	No.	R.
156	40	S.	0	0	Panhysterectomy	July 28th, 1903.	Gauze in vagina.	R.
157	40	M.	3	1	Ovariotomy (double).	August 3rd, 1903.	No.	R.
158	45	S.	—	—	Exploratory laparotomy.	Sept. 22nd, 1903.	Gauze.	D.
159	28	S.	—	—	Double ovariotomy.	Sept. 24th, 1903.	No.	R.
160	44	M.	0	?	Abdominal hysterectomy.	Sept. 24th, 1903.	No.	R.
161	34	M.	5	0	Ectopic pregnancy.	Sept. 25th, 1903.	No.	R.
162	51	M.	6	0	Hysterectomy and appendages removed.	Sept. 25th, 1903.	No.	R.
163	42	M.	4	2	Abdominal hysterectomy.	Sept. 29th, 1903.	No.	R.
164	20	M.	2	0	Ectopic pregnancy.	Sept. 30th, 1903.	No.	R.
165	41	M.	1	0	Hysteropexy.	Oct. 1st, 1903.	No.	R.
166	51	M.	6	0	Abdominal hysterectomy.	Oct. 6th, 1903.	No.	D.
167	40	M.	0	0	Appendages removed.	Oct. 7th, 1903.	Gauze.	R.
168	61	M.	5	1	Abdominal hysterectomy.	Oct. 10th, 1903.	No.	R.
169	34	S.	—	—	Abdominal hysterectomy.	Oct. 13th, 1903.	Gauze.	R.
170	42	M.	10	0	Ovariotomy (right).	Oct. 16th, 1903.	No.	R.
171	47	M.	6	1	Ovariotomy (left).	Oct. 22nd, 1903.	No.	R.
172	31	M.	6	0	Ectopic pregnancy.	Oct. 23rd, 1903.	No.	R.
173	64	M.	13	0	Ovariotomy (right).	Oct. 23rd, 1903.	No.	R.
174	36	M.	3	1	Hysterectomy and appendages removed.	Oct. 27th, 1903.	No.	R.
175	37	S.	—	—	Ovariotomy (double).	Oct. 29th, 1903.	No.	R.
176	31	M.	0	0	Hysteropexy.	Oct. 29th, 1903.	No.	R.
177	26	M.	0	0	Appendages removed.	Oct. 30th, 1903.	No.	R.
178	44	M.	0	0	Appendages removed.	Nov. 3rd, 1903.	No.	R.
179	42	M.	0	0	Ovariotomy (left).	Nov. 5th, 1903.	No.	R.
180	31	S.	—	—	Abdominal hysterectomy.	Nov. 5th, 1903.	No.	R.
181	50	M.	3	0	Ovariotomy (left).	Nov. 6th, 1903.	No.	R.
182	28	S.	—	—	Ovariotomy (left).	Nov. 6th, 1903.	No.	R.
183	27	S.	—	—	Appendages removed.	Nov. 10th, 1903.	Gauze.	D.
184	29	M.	1	0	Ovariotomy (left).	Nov. 19th, 1903.	No.	R.
185	30	M.	0	0	Ectopic pregnancy.	Nov. 20th, 1903.	No.	R.
186	24	S.	—	—	Appendages removed.	Nov. 20th, 1903.	No.	R.
187	36	M.	0	0	Appendages removed.	Nov. 21st, 1903.	No.	R.
188	48	S.	—	—	Abdominal hysterectomy.	Nov. 23rd, 1903.	No.	D.
189	27	M.	3	0	Ectopic pregnancy.	Nov. 24th, 1903.	No.	R.
190	44	M.	1	?	Abdominal hysterectomy.	Nov. 24th, 1903.	No.	R.
191	21	M.§	0		Appendages removed.	Nov. 26th, 1903.	No.	R.
192	65	M.	2	0	Double ovariotomy.	Nov. 27th, 1903.	No.	R.
193	39	M.	8	0	Pyosalpinx, hysterectomy.	Nov. 27th, 1903.	Gauze.	D.
194	45	M.	0	0	Abdominal hysterectomy.	Dec. 1st, 1903.	No.	R.
195	—	M.	—	—	Appendages removed.	Dec. 3rd, 1903.	Gauze.	R.
196	26	S.	1	0	Double ovariotomy.	Dec. 4th, 1903.	No.	R.
197	34	S.	—	—	Myomectomy.	Dec. 4th, 1903.	No.	R.
198	23	M.	0	0	Cæsarean section.	Dec. 5th, 1903.	No.	R.
199	37	M.	1	1	Ectopic pregnancy.	Dec. 6th, 1903.	No.	R.
200	20	S.	—	—	Ovariotomy (right).	Dec. 8th, 1903.	No.	R.
201	39	M.	5	1	Ovariotomy (left).	Dec. 11th, 1903.	No.	R.
202	51	M.	10	2	Ovariotomy and salpingectomy.	Dec. 11th, 1903.	No.	R.
203	21	M.	0	0	Ovarian tumour and appendages removed.	Dec. 15th, 1903.	No.	R.
204	42	S.	—	—	Hysterectomy and ovariotomy.	Dec. 17th, 1903.	No.	R.
205	37	M.	3	0	Appendages removed.	Dec. 17th, 1903.	No.	R.
206	35	S.	—	—	Ovariotomy (double).	Dec. 18th, 1903.	No.	R.
207	22	S.	—	—	Removal of vermiform appendix.	Jan. 1st, 1904.	Gauze.	R.
208	42	M.	1	0	Exploratory laparotomy.	Jan. 2nd, 1904.	No.	D.
209	26	M.		0	Hysteropexy.	Jan. 7th, 1904.	No.	R.
210	25	S.	—	—	Ovarian tumour and appendages removed.	Jan. 7th, 1904.	No.	R.
211	—	M.	—	—	Ectopic pregnancy.	Jan. 12th, 1904.	No.	R.
212	44	M.	2	0	Abdominal hysterectomy.	Jan. 13th, 1904.	No.	R.
213	26	M.	0	0	Double hydrosalpinx.	Jan. 14th, 1904.	No.	R.
214	43	M.	6	?	Abdominal hysterectomy.	Jan. 18th, 1904.	No.	R.

* R = recovery; D = death. § Four years. Nearly.

TABLE GIVING PARTICULARS OF 300 CONSECUTIVE LAPAROTOMIES—(*Continued*).

No.	Age.	Married or single.	Number of children.	Number of miscarriages.	Nature or cause of operation.	Date of operation.	Drainage.	Result.*
215	73¶	M**	5	2	Ovariotomy (double).	Jan. 18th, 1904.	No.	R.
216	25	M.	0	0	Ectopic pregnancy.	Jan. 19th, 1904.	No.	R.
217	45	M**	4	3	Ovariotomy (double).	Jan. 21st, 1904.	No.	R.
218	26	M.	2††	0	Cæsarean section.	Jan. 27th, 1904.	No.	D.
219	27	M.	3	0	Ovariotomy (right).	Jan. 28th, 1904.	No.	R.
220	30	M.	3	0	Ectopic pregnancy.	Jan. 29th, 1904.	Gauze.	R.
221	30	M.	4	1	Ovariotomy (right).	Jan. 30th, 1904.	No.	R.
222	45	M.	1	0	Abdominal hysterectomy.	Feb. 3rd, 1904.	No.	R.
223	49	M.	3	0	Abdominal hysterectomy.	Feb. 9th, 1904.	No.	R.
224	45	M.	0	0	Panhysterectomy	Feb. 23rd, 1904.	Gauze in vagina.	R.
225	35	S.	—	—	Ovariotomy (left).	Feb. 24th, 1904.	No.	R.
226	32	S.	—	—	Abdominal hysterectomy.	Feb. 25th, 1904.	No.	R.
227	23	M.	2	0	Appendages removed.	Feb. 26th, 1904.	Gauze.	R.
228	34	M.	3	0	Hysteropexy.	Feb. 29th, 1904.	No.	R.
229	39	M.	0	0	Ovarian tumour and appendages removed.	March 1st, 1904.	No.	R.
230	30	M.	4	0	Ovariotomy (left).	March 1st, 1904.	No.	R.
231	26	M.	2	0	Ovariotomy (right.)	March 3rd, 1904.	No.	R.
232	49	M.	0	0	Ovariotomy (right).	March 4th, 1904.	No.	R.
233	28	S.	—	—	Ovariotomy (right).	March 10th, 1904.	No.	R.
234	28	M.	4	1	Ectopic pregnancy.	March 11th, 1904.	No.	R.
235	32	M.	1	2	Ectopic pregnancy.	March 17th, 1904.	No.	R.
236	58	M.	3	0	Panhysterectomy	March 18th, 1904.	No.	D.
237	34	M.	5	1	Ectopic pregnancy.	March 22nd, 1904.	No.	R.
238	34	M.	3	1	Cæsarean section.	March 31st, 1904.	No.	R.
239	35	M.	0	0	Ovariotomy (left).	April 5th, 1904.	Gauze.	R.
240	42	M.	2	3	Abdominal hysterectomy.	April 5th, 1904.	No.	R.
241	36	S.	—	—	Abdominal hysterectomy.	April 7th, 1904.	No.	R.
242	40	M.	1	0	Ectopic pregnancy.	April 9th, 1904.	No.	R.
243	25	M.	0	0	Ovariotomy (right).	April 12th, 1904.	No.	R.
244	39	M.	1	0	Ovariotomy (right).	April 14th, 1904.	No.	R.
245	37	M.	4	1	Ovariotomy (left).	April 19th, 1904.	No.	R.
246	34	S.	—	—	Abdominal hysterectomy.	April 22nd, 1904.	No.	R.
247	31	M.	1	0	Ectopic pregnancy.	April 22nd, 1904.	No.	R.
248	26	M.	0	1	Appendages removed.	April 22nd, 1904.	Gauze.	D.
249	37	S.	—	—	Ovariotomy (left).	April 28th, 1904.	No.	R.
250	25	M.	0	0	Ovarian tumour and appendages removed.	April 29th, 1904.	Gauze.	R.
251	26	S.	—	—	Hysteropexy.	May 3rd, 1904.	No.	R.
252	24	M.		1	Ectopic pregnancy.	May 5th, 1904.	No.	R.
253	33	M.	1	1	Ectopic pregnancy.	May 5th, 1904.	No.	R.
254	43	M.	0	1	Ovariotomy (left).	May 6th, 1904.	No.	R.
255	55	M.	11	2	Ovariotomy (right).	May 6th, 1904.	No.	R.
256	42	M.	2	0	Appendages removed.	May 10th, 1904.	Gauze.	D.
257	58	M.	5	1	Ovariotomy (left).	May 10th, 1904.	No.	R.
258	28	M.	1	1	Cæsarean section.	May 12th, 1904.	No.	R.
259	44	M.	1	0	Abdominal hysterectomy.	May 17th, 1904.	No.	R.
260	42	M.	1	0	Abdominal hysterectomy.	May 21st, 1904.	No.	R.
261	23	M.	2	0	Ovariotomy (double).	May 24th, 1904.	No.	R.
262	50	M.	0	0	Ovariotomy (left).	May 26th, 1904.	No.	R.
263	43	M.	3	1	Calcified tumour removed.	May 27th, 1904.	No.	R.
264	21	M.	0	0	Ovariotomy (right).	May 27th, 1904.	No.	R.
265	30	M.	1	0	Appendages removed.	May 27th, 1904.	No.	R.
266	40	M.	0	1	Abdominal hysterectomy.	May 31st, 1904.	No.	R.
267	53	M.	1	0	Exploratory laparotomy.	June 2nd, 1904.	No.	D.
268	42	M.	0	0	Tubo-ovarian cyst.	June 4th, 1904.	Gauze.	R.
269	29	M.	2	1	Ovariotomy (right).	June 7th, 1904.	No.	R.
270	31	S.	—	—	Ovariotomy and hysterectomy.	June 9th, 1904.	No.	R.
271	38	M.	5	2	Ectopic pregnancy.	June 13th, 1904.	No.	R.
272	35	M.	4	0	Hysteropexy.	June 14th, 1904.	No.	R.
273	26	M.	1	2	Ovariotomy (double).	June 14th, 1904.	No.	R.
274	27	M.	3	1	Ovariotomy (double).	June 15th, 1904.	No.	R.
275	60	S.	—	—	Ovarian tumour (partly removed previously).	June 16th, 1904.	Gauze.	R.
276	60	M.	1	0	Ovariotomy (right).	June 17th, 1904.	No.	R.
277	28	M.	1	0	Tubo-ovarian cyst.	June 17th, 1904.	No.	R.
278	46	M.	1	0	Abdominal hysterectomy.	June 17th, 1904.	No.	R.
279	40	M.	2	0	Myomectomy.	June 21st, 1904.	No.	R.
280	24	M.	0	0	Laparotomy for old sinus.	June 24th, 1904.	Gauze and indiarubber tube.	D.
281	21	M.	1	0	Ectopic pregnancy.	June 30th, 1904.	No.	R.
282	43	S.	—	—	Tube and ovary removed.	July 1st, 1904.	No.	R.
283	50	S.	—	—	Abdominal hysterectomy.	July 1st, 1904.	No.	R.
284	26	S.	—	—	Abdominal hysterectomy.	July 8th, 1904.	No.	R.
285	50	M.	1	0	Ovariotomy (left).	July 11th, 1904.	No.	R.
286	29	S.	—	—	Abdominal hysterectomy.	July 14th, 1904.	No.	R.

* R = recovery; D = death.
¶ On Feb. 14th. ** Twice. †† Both died in the birth.

* R = recovery; D = death.

TABLE GIVING PARTICULARS OF 300 CONSECUTIVE LAPAROTOMIES—(*Continued*).

No.	Age.	Married or single.	Number of children.	Number of miscarriages.	Nature or cause of operation.	Date of operation.	Drainage.	Result.*
287	70	M.	0	0	Ovariotomy (left).	July 22nd, 1904.	No.	R.
288	25	M.	2	0	Ovariotomy (left).	July 22nd, 1904.	No.	R.
289	35	S.	—	—	Abdominal hysterectomy.	July 22nd, 1904.	No.	R.
290	30	M.	4	0	Exploratory laparotomy.	July 25th, 1904.	No.	R.
291	44	S.	—	—	Abdominal hysterectomy.	July 28th, 1904.	No.	R.
292	43	S.	—	—	Abdominal hysterectomy.	August 4th, 1904.	No.	R.
293	56	M.	3	1	Ovariotomy (right).	August 5th, 1904.	No.	R.
294	54	M.	5	1	Ovariotomy (double).	August 5th, 1904.	No.	R.
295	38	M.	1	0	Ovariotomy and hysterectomy.	August 8th, 1904.	No.	R.
296	43	M.	2	0	Ovariotomy (right).	August 9th, 1904.	No.	R.
297	26	M.	4	1	Ovariotomy (left).	August 9th, 1904.	No.	R.
298	30	M.	4	3	Ovariotomy (right).	August 11th, 1904.	No.	R.
299	30	M.	2	0	Appendages removed.	August 12th, 1904.	No.	R.
300	59	M.	4	3	Exploratory laparotomy.	Oct 14th, 1904.	No.	R.

* R = recovery.

think, to infection from the rectum or sigmoid flexure, which had been laid bare in parts. The numbers of the 73 cases in the accompanying table are 5, 9, 13, 15, 17, 20, 22, 27, 31, 37, 40, 41, 46, 47, 53, 58, 61, 62, 64, 71, 77, 81, 87, 97, 98, 106, 109, 123, 126, 127, 128, 130, 136, 141, 142, 143, 144, 147, 148, 150, 152, 154, 160, 162, 163, 166, 168, 169, 180, 190, 194, 204, 212, 214, 222, 223, 224, 226, 240, 241, 246, 259, 260, 266, 270, 276, 283, 284, 286, 289, 291, 292, and 295.

III. *Removal of the uterine appendages for chronic inflammation.*—In this group there are 47 cases with four deaths. 15 of the 47 were cases of pyosalpinx. The four fatal cases were all cases of pyosalpinx. In the table the 47 cases are Nos. 2, 7, 11, 25, 28, 34, 36, 38, 39, 50, 51, 65, 67, 72, 74, 75, 76, 85, 88, 90, 93, 101, 102, 103, 104, 110, 111, 121, 125, 151, 155, 167, 177, 178, 183, 185, 187, 191, 195, 205, 213, 227, 248, 256, 265, 282, and 299.

IV. *Laparotomy for ectopic pregnancy.*—There are 33 cases of this kind in my list, with a mortality of one. Seven were emergency operations and in four of these the patient was so collapsed that intravenous injection of salt solution was employed as the abdominal section was begun. These all recovered. In three of the cases (Nos. 164, 235, and 237) the patient had been previously operated on for the same condition on the opposite side. The case that died (No. 29) was a patient suffering from peritonitis with a high temperature at the time of the operation. I used an iodoform gauze drain, which I now think was unnecessary, and it may indeed have had something to do with the fatal result. I never drain these cases now. The 33 cases in the table are Nos. 16, 19, 29, 35, 44, 49, 57, 83, 91, 94, 100, 108, 112, 134, 149, 161, 164, 172, 185, 189, 199, 211, 216, 220, 234, 235, 237, 242, 247, 252, 253, 271, and 281.

V. *Abdominal hysterectomy for conditions other than fibroids.*—There are 17 cases in this class. The numbers in the table are 6, 18, 23, 24, 54, 56, 68, 79, 86, 92, 113, 139, 156, 174, 188, 193, and 236. Six of these patients died. No. 6 was an emergency abdominal hysterectomy for hæmatometra on account of hæmorrhage during an attempt to evacuate the retained blood per vaginam. No. 54 was an abdominal hysterectomy for carcinoma of the body of the uterus in a patient, aged 62, with chronic Bright's disease, bronchitis, and emphysema. The patient was very stout and on account of the state of her chest could not lie down. The wound ultimately broke down in its entire extent and the patient died a month after the operation. No. 86 was an abdominal panhysterectomy for carcinoma of the body of the uterus in a feeble patient, 63 years of age. She died from embolism on the fourth day. No. 188.—In this case there was a malignant mass growing from the peritoneal surface of the uterus with secondary infiltration of the broad ligaments and hydroperitoneum. No. 193 was a case in which hysterectomy became necessary during an operation for removal of a pyosalpinx. No. 236 was a case of carcinoma of the body of the uterus in which a prolonged attempt was first made to remove the uterus by vaginal hysterectomy. As this proved impossible abdominal hysterectomy was performed as an emergency operation

VI. *Exploratory laparotomies.*—There are 14 cases of this kind in the table with a mortality of five. In seven (Nos. 12, 21, 122, 208, 267, 290, and 300) the condition found was malignant. Two of these patients died. There was one case (No. 107) which proved to be intestinal obstruction, one case (No. 158) of large old fæcal concretion which had caused enormous chronic dilatation of the sigmoid flexure, and one case (No. 280) where an operation was undertaken for an abdominal sinus freely discharging pus. These three patients died. There was one case of appendicitis (No. 207); one case in which adhesions about the tubes and ovaries were separated and hysteropexy performed (No. 165); one case in which a calcified tumour, unconnected with the uterus or ovaries, was removed from Douglas's pouch (No. 263); and one case in which pus was let out after separating intestinal and omental adhesions (No. 120); these patients all recovered.

VII. *Cæsarean section.*—There are eight cases of this operation in my list; only one (No. 218) proving fatal, a neglected case in which, unknown to me, the patient had been in labour four days. In two cases the operation was for obstruction due to fibroids (Nos. 63 and 89). In six cases the operation was on account of contracted pelvis (Nos. 117, 153, 198, 218, 238, and 258). Three of the patients were in labour at the time of the operation. Five were operated on before labour had commenced.

VIII. *Myomectomy.*—There are only three cases of this operation in my list (Nos. 48, 197, and 279). In No. 48 the patient was five months pregnant at the time of the operation. The pregnancy was not interrupted. In No. 197 there was a subperitoneal fibroid with a twisted pedicle, and in No. 279 there was a subperitoneal fibroid weighing 12 pounds with extensive adhesions (about 12 inches) to small intestine and mesentery. These patients all recovered.

IX. *Hysteropexy.*—There are five cases of this operation in the list—Nos. 176, 209, 228, 251, and 272, all of which recovered.

Summary.

—	Number of cases.	Number of deaths.
I. Ovariotomy	100	0
II. Abdominal hysterectomy for fibroids, including panhysterectomy for fibroids	73	4
III. Removal of uterine appendages for chronic inflammation	47	4
IV. Laparotomy for ectopic pregnancy	33	1
V. Abdominal hysterectomy for conditions other than fibroids	17	6
VI. Exploratory laparotomy	14	5
VII. Cæsarean section	8	1
VIII. Myomectomy	3	0
IX. Hysteropexy	5	0
Totals	300	21

That is to say, there was a mortality over the whole series of 300 cases of exactly 7 per cent. The series is strictly consecutive. It includes every case in which for whatever reason I have opened the abdomen during the period under consideration. Nor did I refuse to operate on any case because the operation seemed likely to be especially difficult or dangerous. This will, I think, be abundantly clear on an inspection of the particulars of the cases given in the table. I therefore regard the death-rate as being nearly if not quite as low as it should be.

It will be found tha the cases of ovariotomy, of

abdominal hysterectomy for fibroids, of removal of the uterine appendages for chronic inflammation, of laparotomy for ectopic pregnancy, of Cæsarean section, of myomectomy, and of hysteropexy are 269 in number. These groups (I., II., III., IV., VII., VIII., and IX.) comprise by far the largest proportion of the abdominal sections that come under the care of the gynæcologist. In these 269 operations there were ten deaths, a general mortality for the groups in question of 3·7 per cent.

Remarks upon all these cases, which formed part of the tables when the paper was read before the Medical Society of London, will be published in the concluding part.

(To be concluded.)

A CASE OF HYPERTROPHY OF THE MAMMARY GLANDS.

BY DR. JAIME DARQUIER,
SENIOR PHYSICIAN, PIROVANO HOSPITAL, BUENOS AYRES.

THE patient, a woman, 35 years of age, came to the hospital complaining of the trouble that the great enlargement of the mammæ gave her, stating that the illness commenced about 18 months before, the right breast swelling first and soon after the other. The increase was slow, without any pain, and her general state was normal. The examination of the patient showed that all the organs were healthy but the mammæ were enormously increased in size, hanging down like saddle bags and reaching the

Enormous hypertrophy of the mammæ.

umbilical line. The transverse diameter of the right, the larger, was 46 centimetres and its circumference 94. The nipple was completely gone and there were abrasions due to friction. The skin was very thick but not adherent to the deeper layers and the structure had the consistency of a normal breast; in the axilla of the same side there were three or four hypertrophied glands. The left breast was smaller than the right, its diameter being 42 centimetres and its circumference 85 centimetres; there were no abrasions, but as on the right side a few glands were found in the axilla, but smaller. So as to form an idea of the volume of the mammæ they were submerged into water, the right displacing 15 litres and the left 11 litres. Four grammes of iodide of potassium per day and compression of the breast were prescribed, but as at the end of two weeks there was no improvement to be seen it was decided to operate on her right breast, the operation being in charge of Dr. Emina. It was successfully performed by the usual methods, the glands in the axilla being also removed; the actual weight of the breast proved to be 13 kilogrammes. In the operation, which the patient endured very well, about a litre of blood was lost. The left breast at once decreased somewhat in size, but as it still continued to trouble the patient she asked that it should also be removed. This second operation was performed about a month after the first with the same good results; the actual weight of this breast was 10 kilogrammes. One month after this second operation the patient left the hospital completely recovered.

The microscopical examination by Dr. Fernandez showed that the tissue was formed of fibrous meshes with few cells and a good amount of vessels with thick fibrous walls. The glandular acini were atrophied by compression and only a few surrounded by fibrous tissue were healthy. The pathological diagnosis was as follows: chronic fibrous mammitis (Delbet), and diffuse fibroma of the mammæ (Duplay).

The majority of authors place this condition among the mild tumours of the breast but Delbet takes exception to this and classifies it as an acquired anomaly closely connected with the physiological development of the organ. In Dr. Puech's table the weight of such breasts varies from 4 to 15 kilogrammes. In a case treated by Billroth one of the breasts measured 68 centimetres in circumference and the other 65 centimetres. Exceptionally, they may reach almost incredible weights, as in the case treated by Dr. Durston, in which one of the breasts weighed 30 kilogrammes. Delbet states that the skin of the breast is not thickened or adherent to the neighbouring parts; other authors affirm that the skin gets thick and hard, this being so in our case. Authors also differ as to the constitution of the hypertrophied tissue; Duplay states that the predominant element is the connective tissue which by its development greatly modifies the glandular tissue, destroying its functions, and for this reason calls it diffuse fibroma of the mammæ. Delbet, as stated, opines that it is a simple hypertrophy and that the predominance of one or the other of the elements is only due to the structure of the gland at the time the illness begins. If this happens during puberty the connective tissue is predominant, if during pregnancy the glandular. In our case the microscopical examination showed a great predominance of the connective element with atrophy of the glandular tissue, perfectly in accord with Duplay. The genesis of this condition is not well known; Duplay states that it occurs generally in women between 30 and 40 years of age; Billroth says that it is observed in an earlier age, a short time after menstruation appears, this opinion being also shared by Delbet. The hypertrophy of the breast generally begins in a slow form, without pain, exceptionally in an acute way, with fever (acute hypertrophy of Fingerbut); the increase may occur very rapidly, in one night (Durston, Quenu). Generally one of the breasts is attacked first and acquires the greater size. With the development of the illness the breasts are deformed and hang down as saddle bags, as the accompanying illustration clearly shows.

The diagnosis is unmistakeable and although in the present case there were glands in the axilla the fact of both breasts being attacked at the time of the illness excludes the probability of the condition being one of cancer in the strict sense of the term. It should be noted, however, that the glandular infection in our case could be accounted for by the abrasions on the right side only, on the left there was no alteration of the skin. On the other hand, there was some connexion between the size of the glands and the hypertrophy; on the left side with less hypertrophy the glands were smaller and after being operated on the left glands decreased in size. It is worth mentioning that in cases of such hypertrophy pregnancy helps to augment it very much. It is true that the mammary hypertrophy may remain stationary, but cases may be fatal, death occurring by a sort of marasmus or by local complications, gangrene, large abscess, &c. The prognosis is always, therefore, serious, and the treatment, seeing the poor results of medicaments, if the volume of the hypertrophy is great, is to remove the organ, a course that has given such good results in the present instance.

Buenos Ayres.

A SPORADIC CASE OF CEREBRO-SPINAL MENINGITIS.

BY J. RUPERT COLLINS, M.D., B.CH. DUB.

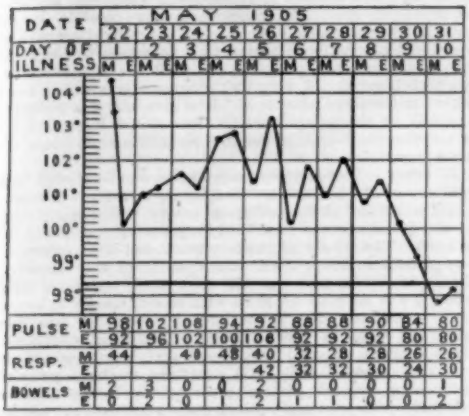
INASMUCH as it is only from the aggregate of individual cases of any disease that we are able to arrive at a correct estimate of it as a pathological entity, it is perhaps well when any types occur of a disease which is but seldom seen that they should be recorded. For this reason I shall now try to describe faithfully and clearly a case of cerebro-spinal meningitis which has occurred in Cheltenham, the first example of the disease in this town.

The patient was a girl, aged 13 years, whose father keeps a shop in which home and foreign birds but no quadrupeds of any description form the stock-in-trade. She was a fair, well-developed girl of a good constitution and had never suffered from any illness beyond having at times slight rheumatic pains in her knees and ankles, for which, however, she had never seen a medical man. Intellectually she was unusually bright and had acted as a teacher's help at school. On Sunday, May 21st, she felt quite well and went to afternoon school and church as usual. After church she went to a friend's house to supper and then for the first time complained of intense cold and sat shivering over the fire. She refused cake and sweets when offered her but drank some tea. On her return home, as she complained of severe frontal headache and "feeling bad," her mother gave her a small dose of antifebrin. She went to bed and slept quietly until the morning. At 9 A.M. she was given some Epsom salts but refused her breakfast and again went to sleep. At 12 noon her mother found her lying unconscious on the bed, having passed urine and fæces under her. At 1 P.M I saw the girl and found her unconscious, lying upon her left side. Her face was very pale, the mouth was wide open, the tongue was dry and very foul, and the breath was extremely fœtid. The pupils were small and equal in size. The respirations were shallow, 48 to the minute; the pulse was weak, 98 in frequency; and the temperature was 104·4° F. There was no sign of any injury on the head or body nor could I find evidence of any local septic process whatever. A few hours later she passed a large motion containing numerous currants. At 6 P.M. the pulse and respiration were better but she was still unconscious. She now vomited what was apparently her Sunday's dinner in an undigested condition. At 10 P.M. she was partially conscious, very restless, answered when shouted at, but would then relapse into a state of quiet delirium. She complained of pain in her back and forehead and cried out when moved. No rash of any description was present. Bromide of potassium, ten grains three times a day, was now ordered her. On the 23rd the child was more conscious but very restless; the tongue was moist and white but not so foul as on the day before; marked retraction of the head was now present. A specimen of urine was obtained; it was clear and light coloured, its specific gravity was 1006, its reaction was acid, and it contained a trace of albumin but no sugar. Towards evening she became very restless and excitable, crying out frequently, "My head! my head!" said she was dying and asked for chloroform to end her misery. The pupils were small, the conjunctivæ were suffused, and photophobia was present. Kernig's sign was now elicited; the knee-jerks were absent. Herpes were beginning to appear on the upper lip and three or four livid coloured spots were observed scattered over the body. I regarded the case as one of cerebro-spinal meningitis and asked Dr. Kirkland to see the patient with me; this he very kindly did the same night and confirmed the diagnosis The result of the physical examination was briefly as follows: the chest movements were calm, the percussion note was normal, and the breath sounds were clear. The position of the apex beat and the extent of the cardiac dulness were normal. The heart sounds were healthy. The abdomen was retracted and free from any localised tenderness; there was no enlargement of the spleen. No enlarged glands could be found anywhere, nor any enlargements of the bones nor periosteal tenderness. There were no sores upon the body. One-eighth of a grain of morphine was given hypodermically at 11 P.M.; this quieted the patient until 2 A.M., when she again became restless and delirious. On the 24th the eruption of labial herpes had become much more extensive, forming a complete ring round the mouth and extending up on to her cheeks. Symmetrical crops of herpes had come out over both knees, both elbows, over each ilium, and a small patch in each axillary fold. A condition of opisthotonos had now developed. Dr. J. H. Garrett, medical officer of health, kindly saw the patient with me and agreed as to its nature. One-sixth of a grain of morphine was now given but did not produce much effect. The patient was put on the following medicine:—Potassium iodide, 5 grains; ammonium bromide, 10 grains; tincture of belladonna, 4 minims; syrup of orange, half a drachm; and chloroform water to make up half an ounce—to be taken four times a day in water. As her bowels had not moved mercury with chalk, 5 grains, was ordered, to be followed by an enema. The elbows and knees had now become so sore that they had to be kept bandaged. The patient passed a very restless night, shouting and moaning so as to be heard in the street. On the morning of the 25th an erythematous rash appeared over the body and limbs. Dr. Kirkland now gave the patient chloroform and under strict aseptic precautions I made a puncture between the third and fourth lumbar vertebræ. Immediately on passing the needle into the spinal canal a thick purulent-looking fluid welled up, about one cubic centimetre coming away; this was collected in a carefully sterilised test tube for subsequent investigation. At the same time cultures were made from the upper part of the nasal fossa by passing a sterilised platinum needle up to the superior turbinated bone and then inoculating directly tubes of Löffler's blood serum and of agar-agar. The anterior nares were quite dry and no visible secretion adhered to the needle on its withdrawal. Cultures were also taken in the same way from the pharynx. A leucocyte count by the Thoma-Zeiss hæmocytometer showed a leucocytosis of 15,887 per cubic millimetre. The patient now became easier and for some hours was quieter than she had been even after the administration of morphine. She also passed a better night than she had had since the beginning of her illness. On the next morning, the 26th, she for the first time recognised me as a medical man and did as she was asked. The head was still more retracted, however. She complained greatly of thirst, due no doubt in part to the belladonna, and drank large quantities of lemon water in addition to three pints of milk, beef-tea, and albumin water. There was never any difficulty in getting her to take abundance of nourishment. A scarlatiniform rash appeared and disappeared in the space of a few hours. She again had a very restless night. On the 27th she was more restless than ever, wanting to get out of bed, turning from one side to the other, and crying out with the pains in her back and forehead. One-sixth of a grain of morphine was given hypodermically but produced no effect at all. The livid-coloured spots noticed at the beginning of the illness had now disappeared but a small patch of petechiæ had formed on either side of the chest at the lower thoracic margin. On the 28th she was quieter and more sensible, the left side of her face was flattened, and the corner of the mouth on the right side was drawn up. The forehead and eyelids were unaffected. The tongue, which had become cleaner, when put out deviated to the left. An evanescent scarlatiniform rash was again present. A leucocyte count showed a leucocytosis of 13,569 per cubic millimetre. At 3 P.M. she fell into a deep sleep which continued unbroken until midnight, when she woke for a few minutes, had a drink, and went to sleep again until 6 A.M. the next morning, the 29th. When I came to see her at 11 A.M. she of her own accord told me that she was much better. The retraction of the head was less and she seemed to be very decidedly improved. The urine when examined was of specific gravity 1008, the reaction was neutral, it contained no albumin and no sugar. She passed a good night and on the 30th was becoming convalescent. Kernig's sign was now absent and the flattening of the face was less marked. On the 31st she was allowed solid food; the tongue was now quite clean. A slight patellar reflex was elicited; pain and headache had ceased and she was able to bring the head into a line with the body but could not flex the neck beyond the vertical. All that remained of her illness was some stiffness of the back and inability to flex the neck, with some paresis of the lower part of the face. With an effort she could now manage to whistle. (Fig. 1.)

The patient's mental state throughout the illness impressed me so forcibly that I recapitulate it here in greater detail,

After the initial unconsciousness had passed off she would continue to talk away, uttering at times nonsense, but generally disconnected fragments of conversation relating to her ordinary life, such as shopping, saying her lessons, &c. If spoken to she showed the greatest irritability and at times became violently excited, especially if the nurse or myself persisted in doing anything she disliked. Any loud sound

FIG. 1.



Course of temperature.

annoyed her greatly. The prick of the hypodermic needle always gave rise to the most bitter reproaches, sometimes mingled with threats and sobs. There seemed to be no dulling whatever of the sensorium; she remembered exactly the number of times I had pricked her with the needle and kept accurate count of the days of her illness. The pains were apparently of the most acute nature, wringing from her frequent moanings and complaints of her head and back, mingled with repeated appeals to me to give her chloroform and let her die and expressions of hope that she would not live long. She always referred the worst pain to the back and forehead and asked for, and apparently found relief from, the application of eau de Cologne on a handkerchief to the temples. Whereas most patients with this disease complain chiefly of occipital headache this was not so in her case. She complained also of pains in her abdomen and "all over." It seemed to be intolerable to her to remain in one position for any length of time, notwithstanding the fact that any movement gave her pain. Her mode of altering her position was curious. She would slowly raise herself on her hands and knees and keeping the head drawn stiffly back turn over to the other side, to which she would arrive with apparent relief, but only in a few minutes to change to a fresh posture. The attitudes are depicted in the accompanying illustrations. (Figs. 2 and 3.) At times she apparently found relief in lying upon her abdomen and resting her chin upon the pillow. As a rule she preferred turning herself to being helped by another, owing to the ever-present dread of her head being moved. If help were given she kept crying incessantly "Mind my head, mind my back." Her attitude with the head drawn back between the shoulders, and arms and legs as a rule flexed, her constant restlessness in spite of the pain she thereby occasioned herself, her delirium and fractiousness, her general hyperæsthesia of the skin, all combined to indicate a widespread superficial irritation of the brain and spinal cord. Superficial because, with the exception of the cervical retraction, there was no definite localised spastic or paraplegic condition of any particular group of muscles or lesion of any particular sense such as would result from a deep-seated pathological focus.

The bacteriological examination proved the case to be due to the presence of the diplococcus intracellularis meningitidis of Weichselbaum. Cover-glass preparations of the cerebro-spinal fluid were made immediately after its removal and were fixed in equal parts of alcohol and ether. These exhibited large numbers of leucocytes, mostly polymorphonuclear and large mononuclear cells, a few degenerated but the great majority intact with a clearly defined nucleus. Diplococci, few in number, were found, both intra- and extracellular; none were observed within the nuclei. These diplococci were decolourised by Gram's method and took up the counter-stain bismarck brown; they were so few in number that it took an hour's search to find any. Cultures were made from the cerebro-spinal fluid in broth, on Löffler's blood serum, and on agar-agar. In 48 hours a growth appeared in the tubes of broth, forming a small white deposit at the bottom but leaving the broth itself clear. When shaken this deposit eddied up like a stringy substance attached by one end to the bottom of the test tube. On Löffler's blood serum an almost colourless growth, flat, confluent, and seen with difficulty, developed. The tubes of agar-agar exhibited

FIG. 2.

Patient lying on the right side, with head strongly retracted.

FIG. 3.

Patient lying on face.

no growth at all. Tubes of agar-agar were now inoculated from the growth on the blood serum; in 24 hours translucent colourless colonies, discrete and elevated, appeared upon the agar-agar, its passage through the Löffler's blood serum having apparently increased its hardiness. All these growths were pure cultures of a diplococcus de colourised by Gram's method but staining well with the ordinary aniline dyes. The confronting sides of the diplococcus were flattened and it frequently occurred in tetrads. The individual cocci showed variations in size and also in depth of staining, this being especially well seen when stained with bismarck brown. In a tetrad sometimes three would be

lightly stained and the fourth coccus stained deeply. Examples of both the lightest and deepest stained cocci were, as a rule, found amongst the larger forms. The component cocci of a single diplococcus were not infrequently unequal in size.

The cerebro-spinal fluid itself was kept for 48 hours without any noticeable increase in the number of diplococci. It was then incubated for 24 hours at 39° C. and proved an excellent pabulum for the organism which grew luxuriantly in it. This is, I think, of some importance, apart from its interest, as cases may occur where suitable culture media are not obtainable. Of the tubes inoculated from the nasal cavity, mixed growths developed both on the agar-agar and on the blood serum. No growth of the specific organism could be found upon the agar-agar, but on the Löffler's blood serum colonies of the diplococci were obtained. No growths of the diplococcus were discovered in the cultures made from the pharynx. The urine immediately after being voided was centifuged; the deposit was washed in distilled water, re-centrifuged, and examined; but though numerous micro-organisms, including diplococci, were found none were detected exhibiting the characteristics of Weichselbaum's diplococcus. The cerebro-spinal fluid was tested as to the presence of iodide of potassium but was found to contain none; ten grains of it had been taken when the lumbar puncture was made.

As to how this case occurred I can offer no explanation. The presence of the organism in the nasal chamber would point to an aerial infection. There was no history of letters, books, clothes, animals, or friends coming from a distance, nor had the child been away from Cheltenham.

I would like to express here my obligations to Dr. Kirkland, not only for his help and interest in the management of the case but also for his kindly assistance in preparing this account of it.

July 1st.—The patient has continued to make an uninterrupted recovery and is now perfectly well.

Cheltenham.

A CASE OF PERFORATED GASTRIC ULCER WITH FATAL HÆMORRHAGE FROM THE BOWEL IN AN INFANT 45 HOURS OLD.

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I WAS hastily summoned one evening to see an infant who was said to be bleeding profusely from the bowel. The mother had been delivered at 4 A.M. the previous day by a midwife who stated that the confinement was in every way normal, the entire duration of the labour (the ninth) not exceeding three hours. When I saw the infant, a boy, he was lying in a semi-collapsed state. The mother's story was that in the evening the child had refused the breast altogether, although he had previously taken it quite readily. When she proceeded to change the infant's napkin, about 7 o'clock, she found that it was saturated with blood of a slightly dark colour and while she was preparing a fresh napkin two great gushes of blood spurted out from the child. On removing this second napkin I found it soaking with blood and a little still continued to ooze away from the anus. The bowels had previously been moved naturally, the colour of the stools being that of meconium. There was no sign of prolapse. The umbilical cord had not been tied until pulsation had ceased; it was properly secured and looked perfectly healthy. There was no history of hæmophilia, syphilis, or phthisis, and the child was not jaundiced. The heart-beats were regular; there was no bleeding from the mucous membranes and nothing to suggest that the child had swallowed blood—e.g., from fissured nipples, or during the act of birth. On examining with the finger in the rectum and bimanually nothing abnormal could be detected; the finger on withdrawal was covered with blood of a fresh colour. The abdomen was most carefully palpated without revealing anything unusual; no tenderness, localised or general, seemed to be present. Invagination of part of the bowel was thought of as a possible cause of the hæmorrhage, but the great quantity of blood lost, its non-admixture with mucus and slimy matter, together with the absence of blood-stained motions and of any indication of tenesmus seemed to negative that view; nor were there any physical signs to support it. Gastric or duodenal ulcer appeared to be excluded by the entire absence of vomiting and by the comparatively fresh colour of the blood lost. A provisional diagnosis was made of some form of ulcer pretty low down in the intestine as being the likeliest cause of the hæmorrhage, and, acting on this theory, a rectal injection of equal parts of adrenalin and hamamelis was given, the grave condition of the child precluding any possible surgical measures being resorted to. A small plug of cotton-wool was inserted temporarily in the rectum to retain the injection. The infant was then placed in bed with the legs raised and the head lowered. A very bad prognosis was given, having regard to the large amount of blood lost, and this was amply justified by the infant's death three hours later, being six hours after the bleeding was first noticed and 45 hours after birth.

Necropsy.—Post-mortem examination was restricted to the contents of the abdomen. On opening into the abdomen no blood was found in the peritoneal cavity. The entire length of the intestine was examined for intussusception but none existed. The whole alimentary tract was then removed in one piece from above the cardiac opening of the stomach to the lower rectum and was slit open along its entire length when it was seen to be filled with blood, mostly in a semi-fluid condition. No indication of ulceration was found until the stomach was reached. This organ contained a large amount of semi-fluid blood and mucus mixed with partially digested milk. On carefully washing away this detritus a typical gastric ulcer of the acute form was exposed, with perfectly clean-cut, punched-out margins, situated on the posterior wall of the viscus near the lesser curvature and about half an inch from the cardiac opening. The ulcer was completely perforated and, as some shreds of mucoid material were found adhering to its peritoneal aspect, the posterior abdominal wall was again examined and a little of this blood-stained mucoid matter was seen lying in the situation which the ulcer must most probably have occupied, evidently indicating that adhesion of the ulcer had actually taken place at this point but had become separated during the removal of the stomach from the abdomen and had been the means of preventing the escape of the blood into the peritoneal cavity. The ulcer was circular in form and was almost of the size of a threepenny-piece on its inner surface. Running up to the ulcer a blood-vessel could be traced with some difficulty, probably a large branch of the left superior coronary artery of the stomach and the one whose rupture had set up the hæmorrhage. The mucous lining of the stomach for a radius of three-quarters of an inch from the circumference of the ulcer was markedly congested and formed a notable contrast with the remainder of the mucosa which was distinctly paler in colour. There was a slight thickening all round the edges of the ulcer and its immediate vicinity. The other abdominal organs were normal.

Gastric ulcer is very rare before puberty, yet it has occasionally been observed soon after birth and also in the newly born. In most cases it has been the simple ulcer but tuberculous and syphilitic ulcers have been described in this connexion. The extreme rarity of the condition in the very young has been attested by various writers. Thus Fenwick[1] refers to 18 collected cases of genuine examples of ulcer of the stomach in infancy or childhood, 13 of which were of the acute type and five of the chronic variety, the ratio of females to males being 4 to 1. Welch,[2] quoted by Fenwick, found out of 607 cases only one case occurring in the first decade of life, and Rokitanski[3] had not met with a single case under 14 years of age in his extensive experience. Goodhart[4] records a case in which death took place 30 hours after birth and in which the ruptured vessel could be seen with a lens lying open in the floor of the ulcer. Ulceration of the stomach at birth has also been described by Rilliet, Billard, Henoch, Dreschfeld, Düsser, and others. Recently Morris and Feldman[5] have published a case of hæmatemesis and melæna in an infant two days old, due undoubtedly to gastric ulcer, in which recovery took place, a termination met with, according to Eichhorst, in less

[1] Fenwick: Ulcer of the Stomach and Duodenum, 1900.
[2] Ibid. [3] Ibid.
[4] Goodhart: Transactions of the Pathological Society of London, 1881, vol. xxxii.
[5] Morris and Feldman: Brit. Med. Jour., Feb. 18th, 1905.

than 50 per cent. of such cases. Actual perforation of the ulcer, as in our own case, is extremely rare. A puzzling feature of this case was the entire absence of vomiting. Considering the ease with which infants reject the contents of the stomach it certainly seems strange that all the blood should have been passed per rectum. In most cases of gastric ulcer blood accumulating in the stomach acts as a foreign body and excites nausea, followed by vomiting in a very short time. In other cases, again, the irritation of blood lying in the stomach would seem to stimulate intestinal movements to get rid of it by the bowels. Still, it must be very rare that vomiting is entirely absent and that all the blood is voided per rectum. Such a condition would almost suggest *a priori* a mode of distinguishing between duodenal and gastric ulcer but this case seems to show that such a distinction cannot be depended on. What determined the actual onset of bleeding in the case is an interesting speculation. Most probably it was due to the milk imbibed setting up vigorous gastric peristalsis, which, with the concomitant increased vascularity of the organ consequent upon the act of digestion, would be sufficient to bring about the final rupture of the already partially eroded vessel or to dislodge any clots which may have sealed over the opening of the vessel at the point of erosion.

Wigan.

RATES OF ATTACK BY ENTERIC FEVER IN 90 LARGE TOWNS OF ENGLAND AND WALES.

BY G. S. BUCHANAN, M.D. LOND.,
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A GENERAL indication of the relative degree of prevalence of enteric fever in different towns, or groups of towns, in England and Wales can readily be obtained by reference to the mortality returns published by the Registrar-General. Often, however, it would be more useful to be able to contrast the relative number of notified cases of this disease than to be guided by the relative number of deaths. In an addendum to a report to the Local Government Board on the sanitary circumstances of Sheerness, lately published, I have recorded a considerable series of attack rates by enteric fever which were calculated for this purpose and are likely to be of sufficient general utility to warrant their reproduction.

In the table below are given the annual attack rates by enteric fever in 90 large towns of England and Wales during the years 1898 to 1904 inclusive. The middle year 1901 is the census year and the rates have in each instance been reckoned on the 1901 census population, a proceeding sufficiently exact for the purpose required. The figures have been extracted and tabulated in the medical department of the Local Government Board by Mr. W. Hunter. My colleague Dr. Theodore Thomson, in a report on enteric fever in Swinton and Pendlebury (Annual Report of the Medical Officer of the Local Government for 1898–99, p. 168) gave the annual attack rates by enteric fever of 50 towns for which the necessary data were then available. These figures were quoted at the time in THE LANCET.[1] For convenience of comparison I have marked these 50 towns with an asterisk in the table below. The annual attack rate by enteric fever for the whole of these 50 towns during the period with which Dr. Thomson dealt, 1893–97, was 1·03.

The table below gives the annual attack rates by enteric fever from 1898 to 1904, inclusive, of: (*a*) the 75 towns of England and Wales which had a population at the 1901 census exceeding 50,000. In the case of 35 of these 75 towns the corresponding attack rates for the period 1893–97 were given by Dr. Thomson in the report referred to. (*b*) 15 towns of England and Wales with a population at the last census less than 50,000, in respect of which Dr. Thomson gave the corresponding attack rates for the period 1893–97. The total number of towns dealt with in the table is thus 90. The data enable calculation of the following annual attack rates by enteric fever during 1898–1904: all the 90 towns, 0·96 per 1000; all the 75 towns of England and Wales whose population at the 1901 census exceeded 50,000, 0·97 per 1000; all the 50 towns whose attack rates for 1893 to 1897 were given by Dr. Thomson, 0·89 per 1000.

Towns.	Population (census), 1901.	Annual attack rates per 1000 by enteric fever during the seven years 1898–1904.
90 urban districts	15,170,479	0·96
75 urban districts with populations over 50,000	14,506,863	0·97
*50 urban districts	10,411,007	0·89
*London	4,536,541	0·71
*Liverpool	684,958	1·19
Manchester	543,872	0·81
*Birmingham	522,204	1·12
*Leeds	428,968	1·01
*Sheffield [99]	380,793	1·73
*Bristol	328,945	0·65
*Bradford	279,767	0·93
West Ham	267,358	1·54
*Kingston-on-Hull	240,259	0·89
Nottingham	239,743	1·75
*Salford	220,957	1·27
Newcastle-upon-Tyne [98]	215,328	0·50
Leicester [98]	211,579	0·61
Portsmouth [00]	188,133	2·38
Bolton	168,215	1·30
*Cardiff	164,333	0·50
Sunderland [98]	146,077	1·73
Oldham	137,246	0·48
Croydon	133,896	0·37
Blackburn	127,626	1·24
Brighton [99]	123,478	0·65
Willesden	114,811	0·54
Rhondda	113,735	2·56
Preston	112,989	1·48
Norwich [98]	111,733	1·24
Birkenhead	110,915	1·76
Gateshead [98]	109,888	0·51
*Plymouth [00]	107,636	0·62
Derby	105,912	1·00
Halifax	104,936	0·66
*Southampton	104,824	1·20
*Tottenham	102,541	0·93
*Leyton	98,912	0·89
*South Shields	97,263	1·06
Burnley	97,043	0·82
East Ham	96,018	1·14
*Walthamstow	95,131	0·90
Huddersfield	95,047	0·62
Swansea	94,537	0·66
*Wolverhampton	94,187	1·29
*Middlesbrough [98]	91,302	1·40
*Northampton	87,021	0·56
*Walsall	86,430	0·83
*St. Helens [99]	84,410	1·47
Rochdale [98]	83,114	0·45
*Stockport [98]	78,897	0·81
York [00]	77,914	1·55
*Aston Manor	77,326	1·56
Reading	72,217	0·35
*Hornsey	72,056	0·37
*Devonport	70,437	0·56
*Coventry [99] [01]	69,978	0·95
*Merthyr Tydfil [03]	69,228	2·34
*Newport (Mon.)	67,270	0·69
Ipswich [99]	66,630	1·65
Hastings [99]	65,528	0·32
*West Bromwich [00]	65,175	0·93
Warrington [00]	64,242	0·78
*Grimsby	63,138	4·06
*West Hartlepool	62,627	0·38
Hanley [99]	61,599	1·19
Wigan [99]	60,764	1·48
Bootle [98]	58,556	1·30
Bury	58,029	0·70
*Barrow-in-Furness	57,586	1·09
King's Norton and Northfield	57,122	0·51
*Smethwick	54,539	0·91
Rotherham	54,349	1·28
Wallasey [01]	53,579	2·10
Handsworth (Staffs)	52,921	0·55
Stockton-on-Tees	51,478	1·26
*Tynemouth	51,366	0·45
Great Yarmouth [98]	51,316	2·00
*Burton-on-Trent [01]	50,386	0·54
*Bath	49,839	0·29
*Oxford [98] [00]	49,336	0·25
*Southport	48,083	0·70
*Gloucester	47,955	0·17
*Exeter [99]	47,185	1·51
*Bournemouth	47,003	0·22
*Worcester	46,624	0·37
*Carlisle	45,480	0·32
*Darlington	44,511	1·20
*Eastbourne	43,344	0·35
*Dover	41,794	0·31
*Barnsley	41,086	2·36
*Cambridge [98]	38,379	0·71
*Colchester	38,373	0·51
*Macclesfield [00]	34,624	0·95

* Fifty urban districts for which attack-rates by enteric fever in 1893–97 were recorded by Dr. Thomson in the annual report of the Board's medical officer for 1898–99, p. 168.

[97], [98], &c. In the year indicated the number of enteric fever cases notified exceeded one quarter of the total number of enteric fever cases notified during the seven years 1898–1904.

[1] THE LANCET, Feb. 25th, 1899, p. 542.

A NOTE ON THE EXAMINATION OF CULTURES AND SMEARS FROM THE THROAT AND THE NOSE.

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IN relating a staining method which has been used for the detection of the bacillus diphtheriæ at the North-Eastern Hospital for about 18 months and which, so far as I can ascertain, has not been already described in this connexion, it may be well at the outset to intimate that no new feature of the bacillus is brought out and the sole reason for this note is that the stain has proved more convenient than others in general use. It is now customary to make several cultivations from the throat and nasal cavities of diphtheria convalescents before discharge from hospital in order that freedom from infection may be insured; in many hospitals, also, cases of scarlet fever are examined at the time of admission with a view to preventing the occurrence of post-scarlatinal diphtheria. Examination for the bacillus diphtheriæ thus occupies a prominent position in the routine work of a fever hospital and it is essential that the method adopted should be speedy and convenient. The reaction to litmus of subcultures in neutral glucose broth, pathogenicity to guinea-pigs, and appearance of colonies on various media are tests obviously not suitable for routine work and the question reduces itself practically to a consideration of the methods of staining films of colonies found in a blood-serum cultivation after some 20 hours' incubation.

For many years it has been recognised that the protoplasm of certain bacteria contains granules that stain deeply with aniline dyes. The significance of these granules, the so-called Babès-Ernst bodies, has not been definitely established. Some have believed them to be products of degeneration, while others, on the contrary, have regarded them as reserve substances. Ernst attributed a nuclear nature to them and Crouch[1] thought their polar position possibly represented a division of nuclear substance preliminary to the division of the micro-organism. These granules are especially well marked in diphtheria bacilli when grown for 20 hours on blood serum prepared according to Löffler's formula and in my experience they occur with remarkable constancy. It thus comes about that the differential staining of these Babès-Ernst bodies forms the basis of nearly all the staining methods for the recognition of the Klebs-Löffler bacillus. It must not be forgotten, however, that this bacillus is but one of several micro-organisms which show these granules, and it is well when the bacilli under observation do not conform in general appearance and arrangement with the recognised standard that they should be investigated in further detail. The final and only certain laboratory test for the bacillus diphtheriæ is that it is pathogenic to the guinea-pig, while a control animal protected by antitoxin is immune. Bacilli showing polar granules may sometimes be obtained from the throat, nares, and especially the ear, which are not pathogenic to the guinea-pig. One form so closely resembles the bacillus diphtheriæ in all its reactions as to be regarded as a non-virulent form of this organism; it appears to be not very uncommon in the throats and noses of healthy school-children in large centres of population where diphtheria is endemic, and there is no evidence that it can become pathogenic. There are occasionally found other non-virulent bacilli which, while showing polar bodies, generally differ from the Klebs-Löffler bacillus in length, arrangement, coherence, or rate of growth on blood serum sufficiently to make the risk of their being confounded with the more important organism not a great one. Mervyn Gordon[2] and Graham-Smith[3] have examined in detail a number of these bacilli, which are especially to be suspected in cultures from the ear, and their papers and illustrations may be consulted with advantage. Again, the bacillus coryzæ segmentosus, found in the nasal discharges in acute influenzal cold, may show polar granules in a small proportion of bacilli. The bacillus Hoffmanni usually exhibits none of these bodies, but occasional colonies, especially in cultures obtained from the nose, may show granules in scattered bacilli; these as a rule are readily differentiated by the shortness and uniformity of the individual micro-organisms. Similar granules may be present in leptothrix of the mouth, not infrequently seen in swab-smears, while some varieties of cocci and streptobacilli exhibit them markedly.

The procedure for demonstrating these polar bodies originally recommended by Ernst consisted in staining first with a methylene blue solution and then with vesuvin for a few seconds. Crouch[4] in 1895 used methyl green and dahlia, followed by vesuvin. In 1896 Neisser[5] introduced the use of a methylene blue solution, acidulated with glacial acetic acid, for one to three seconds, counterstaining with vesuvin for three to five seconds. In three out of 39 typical cultures of virulent diphtheria bacilli, however, he failed to show polar granules by this method,[6] and various slight modifications (principally as regards time) were later proposed by several observers.[7] Pitfield[8] (1901) used three solutions containing silver nitrate, pyrogallic acid, and carbol-fuchsin. Hunt's method also involved the use of three solutions—methylene blue, tannic acid, and methyl orange. M. Piorkowski[9] (1901) recommended Löffler's methylene blue, followed, after decolorisation with acid alcohol, by eosin. W. G. Schauffler,[10] his pupil, improved on this, using a mixture of Löffler's blue, acid alcohol, and pyronin; while Andrade[11] has published yet another stain, a mixture of Borrel's blue and vesuvin solution. Of these, Neisser's method has met with most popularity; it requires, however, some care and experience in its application for a negative result to be trustworthy. A course commonly adopted is to examine a film stained by Löffler's blue and to confirm by examination of a duplicate specimen stained by Neisser's solutions. The stain which I have used during the past 18 months combines to a great extent the advantages of these two methods. It consists of toluidine blue[12] (Grubler's, obtained from Baird and Tatlock, Hatton garden) one gramme, dissolved in absolute alcohol 20 cubic centimetres and distilled water one litre, to which glacial acetic acid, 50 cubic centimetres, is added. The stain has been usually applied for two minutes, but it may be left on considerably longer without ill-effect. When examined in a bright artificial light all the Babès-Ernst bodies, whether in bacilli or cocci, are seen to be stained a reddish-purple, the diphtheria bacilli thus standing out prominently. The bodies of the diphtheria bacilli stain a faint purplish-blue; those of other bacilli, including that of Hoffmann, acquire a pale but more definite blue tint, as also do most cocci; some varieties of staphylococci, however, show a uniform reddish-purple coloration. There is no difficulty in deciding whether the purple granules are in bacilli or cocci and specimens may as a rule be examined with considerable rapidity, for the stain appears constant in its action and the film is easily focussed. Only one solution is thus required, and that a stable one, while there are within reason no time limits in its application. These are obvious advantages when dealing with large numbers of cultures.

It may be added that the stain has been found convenient in the examination of swab smears, although polar granules are far from constant in diphtheria bacilli found under these conditions. In order partly to detect Vincent's angina but principally to prevent the introduction of atypical cases of scarlet fever into the diphtheria wards, such examination is made in the receiving room of all cases admitted under certificate of diphtheria. A new slide or coverslip is gently warmed, and the swab, before being used to inoculate the blood-serum tube, is rubbed over its surface, and the toluidine stain applied for about two minutes. Only those cases in which definite diphtheria bacilli showing polar granules have been found in the smear are sent directly to the diphtheria wards; all others are detained in observation rooms until the original diagnosis has been confirmed or

[1] New York Medical Journal, Oct. 5th, 1895, p. 430.
[2] Supplement to the Thirty-first Annual Report of the Local Government Board, 1901-02.
[3] Journal of Hygiene, vol. iv., No. 2, 1904, p. 258-328.
[4] Loc. cit.
[5] Zeitschrift für Hygiene, Band xxiv., 1896.
[6] See Kurth, Zeitschrift für Hygiene, Band xxviii., 409.
[7] R. T. Hewlett, Brit. Med Jour., Sept. 3rd, 1898, p. 599; A. A. Coles, ibid., May 20th, 1899, p. 1213; F. F. Caiger and W. C. C. Pakes, ibid., Sept. 21st, 1901, p. 758; L. Cobbett, THE LANCET, Nov. 23rd, 1901, p. 1403; and M. Gordon, loc. cit.
[8] University of Pennsylvania Medical Bulletin, vol. xiv., 1901, p. 274.
[9] Berliner Klinische Wochenschrift, No. 9, 1901.
[10] New York Medical Record, Dec. 6th, 1902, p. 895.
[11] Medical News, March 12th, 1904.
[12] There appear to be two kinds of toluidine blue on the market; one, which in the powder has a reddish tinge, should be avoided in making this stain.

negatived by culture. Reference to the register shows that, among the last 574 cases admitted under certificate of diphtheria, repeated cultures proved negative in 172. Of the remaining 402, in which the diagnosis was confirmed by the bacteriological examination, 231 had exhibited in the swab-smear diphtheria bacilli with polar granules, a percentage of 57.

South Tottenham, N.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A LARGE HYDROCELE OF THE TUNICA VAGINALIS.

BY C. LLOYD WORRALL, L.R.C.P. LOND., L.S.A.,
DISTRICT SURGEON, BARBERTON, TRANSVAAL.

ON May 30th I was called to see a native (at the office of the Commissioner of Native Affairs) who was reported to be "suffering from an extraordinary enlargement of the testicles." Visions of elephantiasis of the scrotum flashed across my mind but these were soon dispelled on examining the case. The history briefly was that the tumour had been gradually developing for four years and that it had never given much pain except that on walking there was a general ache. The patient had no recollection of any injury whatsoever to the parts.

I found on examination an enormous scrotal tumour of fairly regular outline, the left side being considerably the larger—it was quite dull all over on percussion and had that elastic feel which strongly suggested fluid. An examination for translucency proved quite negative. There was no impulse on coughing and the spermatic cord could easily be traced to the external rings. The penis was merged into the tumour in such a way that the prepuce alone was in evidence. As I was convinced that the tumour could be no other than an enormous hydrocele I decided to tap it and drew off in all slightly over 78 ounces of fluid. This was contained in two sacs. In the larger one the fluid was dark from what appeared to be disintegrated blood and in the other sac it was the ordinary straw coloured hydrocele fluid.

I venture to report this case as it has one or two points of interest—its enormous size and yet causing little pain or discomfort. Again it was noteworthy that notwithstanding the fact that this hydrocele had been forming for something like four years and reached such a size, the testicles seemed quite normal in size and apparently showed no sign of atrophy. One would have thought that the abnormal pressure of the fluid would have tended to make these organs degenerate and shrink. Another little point worth mentioning is that this native had come in to see the commissioner to report his wife having run away with another native. What a domestic tragedy could possibly have been avoided had this wretched man thought fit in good time to call in the services of a surgeon.

I regret that I am not in reach of any special work on the diseases of the generative organs and therefore am not able to determine the frequency or otherwise of these enormous hydroceles. I note that Erichsen quotes "that Gibbon the historian had an enormous hydrocele, which was tapped by Cline, who drew off six quarts of fluid."

Barberton, Transvaal.

A CASE OF ZONA OF THE FOREARM AND HAND.

BY R. E. P. SQUIBBS, M.R.C.S. ENG., L.R.C.P. LOND.

THE notes of the following case may be of interest on account of the rarity of zona of the forearm and hand. R. Liveing in his "Handbook of Skin Diseases," writes, "On the forearm and hand zona is but rarely seen," and Hilton Fagge says, "In some instances of brachial zoster the vesicles reach down to the finger but this is very exceptional."

On June 15th last I was sent for to see the patient, a stout married woman, aged 61 years, and found her suffering from a typical attack of zona of the left forearm and hand. She complained of severe pain of a neuralgic character. The eruption consisted of several clusters of vesicles on inflamed patches of skin, and were situated on the anterior surface of the forearm, and followed roughly the course of the internal cutaneous nerve. In the palm of the hand a large pemphigus-like bleb had developed and into this some hæmorrhage had evidently taken place. There were also some vesicles on the inner side of the arm, one of which was followed by a small ulcer. The case was successfully treated by the application of hazeline cream and fuller's earth and the internal administration of tonics.

New Lenton.

Medical Societies.

GLASGOW AND EDINBURGH OBSTETRICAL SOCIETIES.

Secondary Operation for Complete Rupture of the Perineum.

THE combined summer meeting of these societies was held in Glasgow on June 21st, Dr. J. K. KELLY, President of the Glasgow Obstetrical and Gynæcological Society, being in the chair.

Dr. C. J. CULLINGWORTH, Honorary President of the Glasgow Society, read a paper on the Secondary Operation for Complete Rupture of the Perineum. He said that owing to the new possibilities which have been opened up by advances in abdominal surgery the interest in the older gynæcological operations had of late years somewhat dwindled; and yet some of these, especially the plastic operations, ministered quite as much to the comfort and well-being of the patients as the more showy achievements of modern times. In tracing the history of the operation Dr. Cullingworth mentioned those of Langenbeck in 1853, Jonathan Hutchinson in 1864, Delere in 1876, and those associated with the names of Emmet, Hegar, Hildebrandt, and Lawson Tait. Emmet's operation, or some modification of it, was the one usually practised in the United States, while in this country the flap-splitting operation of Lawson Tait was perhaps the one most generally adopted. The splitting of the flap by angular scissors instead of laboriously dissecting with a knife simplified and shortened the operation. The weak point was that it left unsutured both the rectal wound and the vaginal wound. In order to be satisfactory any method of operation should fulfil the following conditions: 1. It should restore the perineum as nearly as possible to its original size and shape. The gynæcologist should familiarise himself with the size and shape of the average perineum by taking mental notes of these during his ordinary examination of patients. It was always a temptation to the inexperienced, partly from anxiety lest the new perineum should not be long enough, to carry the new perineum too far forward. This might cause difficulty during labour or dyspareunia. 2. There should be brought into apposition a sufficiently large area of raw surface on the two sides as to make union almost certain. 3. The edges of the rectal side of the tear and those of the vaginal side should be severally brought together by careful suturing. 4. The patient's convalescence should be rendered as free as possible from pain and discomfort. Lawson Tait drew attention to the fact that if the skin was not sutured the patient suffered no pain. Dr. Cullingworth includes only a narrow edge of skin in the sutures and this produces very little pain if there is no tension when they are tied. If no skin is included in the sutures they get buried and the stitches are difficult to get out. 5. The operation should be easy of execution and uncomplicated in its character. 6. The operation should have the result of restoring to the patient efficient control of the bowel. Dr. Cullingworth begins his operation after the method of Lawson Tait by dividing with scissors the cicatricial line of the lower end of the recto-vaginal septum, then upwards on either side and to a less extent backwards, the whole incision roughly representing a capital H. The lateral incisions should be carried forward to the end of the cicatricial tissue, or if that should be indefinite, then to the point where the labia minora commence. The backward cuts are much shorter and facilitate the exposure and union of the divided ends of the sphincter. The vaginal flap should be reflected backwards by scissors or by a knife with the

left forefinger as a guard in the rectum. The method of suturing was not a point of importance. Dr. Cullingworth begins by passing a suture entering the skin one-sixth of an inch from the edge of the wound, immediately below the angle of reflection of the vaginal flap. It is passed completely round from one side to the other, quite buried, and going down to the substance of the recto-vaginal septum at the base of the vaginal flap. This braces up the whole perineum and prevents any spaces being left at the bottom of the wound. Stout silkworm gut is used. The rectal tear is now sutured by passing the needle into the tissue close to the rectal mucous membrane and bringing it out half an inch from the edge and then passing over to the other side in a similar manner. The ends are tied and left long in the rectum. Other sutures are inserted in the same manner. Catgut is used for these stitches. The vaginal side of the laceration is then closed by a series of interrupted silkworm-gut sutures; the ends are left long and turn into the vagina. These long ends facilitate very much the removal of the stitches. Then the rest of the perineal sutures are inserted, not passing quite down to the base of the denuded surface. The last one is passed down deep at the side of the anus but no attempt is made to isolate the torn ends of the sphincter and the results are almost invariably satisfactory. Superficial stitches may be required. Two small strips of lint, three inches by three-quarters of an inch, anointed with vaseline, are placed at either side of the stitches. These are kept in place by the ordinary position of the thighs. Vaginal douches are only ordered when there is a purulent or offensive discharge; the wound is washed with wool-sponges. The catheter is usually required for two or three days, or the patient can turn on her hands and knees and pass urine without any more fear of soiling than in the use of the catheter. The patients are kept in bed for 14 days. Enemata are to be avoided, as they may interfere with the union on the rectal aspect. The patient is given a full dose of castor oil 60 hours after the operation and an aperient every other night afterwards. The stitches are removed on the eighth day. It may be reported that a little fæcal matter has escaped; if this matter comes from the perineal wound the opening will probably close but if from the vagina, showing a recto-vaginal fistula, it rarely heals. In again operating on these latter cases it is best to divide all the tissues and to do it all over again.

Dr. D. BERRY HART considered Dr. Cullingworth's method was an exceedingly good one. The deep suture into the base of the septum was very important. But he thought a weak point in the method was in having the ends of the stitches of the rectal flap hanging into the rectum. This favoured the contamination of the rectal wound and might have disastrous results on the operation. Dr. Hart favoured the dissecting out of the torn ends of the sphincters in order to secure muscular union after insertion of the sutures. Dr. Kelly (Baltimore) and Dr. Noble (Atlanta) practised a good method to prevent extravasation of fæces into the apex of the rectal flap. After the reflection of the flaps in the usual way they pull down the apex of the rectal gap to the anal orifice instead of burying it, as in Dr. Cullingworth's operation. If the rectal flap is thick it dilates the anus a little but the results are good. Dr. Hart favoured stitching with catgut in tiers.

Dr. W. L. REID had practised many different methods in the last 25 years; now his plan was very much what Dr. Cullingworth had described. Along with repair of the perineum some other operation was frequently performed such as amputation of the cervix. In these cases and whenever there was any discharge that might decompose he used the douche. To prevent any injury to the stitches the douching was carried out by passing a piece of soft rubber tubing into the vagina and irrigating with boric lotion twice daily. He did not employ any dressing but irrigated the wound freely with boric lotion. He had given up using the catheter, but both before and after micturition allowed boric lotion to flow over the wound; there was no fear of harm from fresh urine, only from urine if it were decomposing. He had tried but never once succeeded to lay hold of the ends of the sphincter, but he always passed his stitch deep in the probable position of the ends.

Dr. A. H. FREELAND BARBOUR considered it was better to carry the dissection deeper into the recto-vaginal septum than was indicated by Dr. Cullingworth. This permitted the edges of the rectal tear to be brought well together. He never passed any stitch into the bowel, closing the rectal tear by bringing the tissues immediately over the mucous membrane together. He always made an effort to get a good hold of the end of the sphincter.

Dr. SAMUEL SLOAN stated that in the discussion Lawson Tait's operation had been lost sight of as it had no rectal stitches. In his experience the perineum was not brought far enough forward. A source of failure was the presence of any purulent discharge and this should be carefully treated as by curetting in a case of purulent endometritis.

Dr. N. T. BREWIS pointed out that the Americans insisted on the importance of obtaining union of the torn ends of the sphincter. He never found any difficulty in dissecting out the torn ends in his cases. He followed Lawson Tait's method till a few years ago but he then altered it by dissecting out the ends of the sphincter and passing a stitch through one end completely round the rectal gap and then picked up the other end; this stitch was passed through the tissues a little from the rectal mucous membrane. In most cases this plan did very well but in some cases a recto-vaginal fistula resulted due to slipping of the sphincter. To obviate this risk he dissected the rectal flap from above downwards. This flap formed the anterior rectal wall and prevented contamination with fæcal matter, as there was no communication between the wound and the rectum, and prevented the sphincter from slipping down. He considered it an important point to bring the torn ends of the sphincter together and also the fasciæ. He used chromicised catgut all through, passed under the edge of the skin and all buried.

Dr. CULLINGWORTH, in reply, stated that he had always got good results without seeking for the ends of the sphincter and that the drawings he had seen of this detail in the operation showed a considerable extension of the area of raw surfaces. He considered this an unnecessary addition to the operation with no distinct gain.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—The annual provincial meeting of this society was held on June 17th at the Hospital for Children, Sheffield, Dr. C. H. Willey being in the chair.—Cases and specimens were shown by Dr. Willey, Dr. C. N. Gwynne, Dr. J. H. Wilks, Mr. Simeon Snell, Mr. S. E. Morton, Dr. H. Leader, Dr. Arthur J. Hall, and Dr. J. G. Emanuel.—Dr. Gwynne read a paper on Osteomyelitis and Suppurative Pericarditis in a girl, aged seven years, successfully treated by operation in 1903. The femur and radius were affected. Incisions were made and were followed in three days by parotitis and pericarditis. Ten days later the pericardium was laid open and about ten ounces of pus were evacuated. A tube was inserted and removed on the tenth day. In spite of further pyæmic complications the child recovered. The heart now showed some hypertrophy.—Dr. G. Carpenter and Mr. S. Stephenson reported a case of Tubercle of the Choroid in a girl, aged three years. A very large number of fawn-coloured tubercles, of unusually large size, were found, chiefly in the region of the optic discs. Some of them invaded the retina. A diagnosis of acute miliary tuberculosis was made and verified subsequently. Death resulted 33 days after the onset, 19 after admission to hospital, and five after the diagnosis, which could not have been made with certainty apart from the state of the eyes.—Mr. J. Jackson Clarke read a paper on Certain Practical Points in the Treatment of Congenital Dislocation of the Hip by Lorenz's Method. The shortened muscles must be fully stretched and the great trochanter brought down to, or below, its normal level. In children over four years of age the adductors might require subcutaneous section. He then described the act of reduction, the application of the retention apparatus, the subsequent use of massage and exercises, and the management of special cases.—Mr. R. C. Dun described a case of Median Hare-lip, a very rare deformity. The cleft was exactly in the middle line, the incisor teeth were perfect, and there was no alveolar cleft.—Mr. H. S. Clogg read a paper on Appendicitis in a Hernial Sac, based on two cases in boys, successfully treated by operation. He stated that about 25 per cent. of recorded cases occurred in children; that the condition had been reported in quite young infants; that the appendix in a hernial sac was unduly prone to inflammation; that the condition could not be diagnosed with certainty from strangulation of the appendix or of Meckel's diverticulum; and that most cases were mistaken for strangulated hernia because of the sudden onset, abdominal

pain, and the presence of a local irreducible swelling without impulse on coughing. The presence of fever from the onset, the indefinite character and smaller size of the swelling, and the early occurrence of œdema and redness of the skin were of diagnostic value.—Papers were also read by Dr. Gwynne on Two Cases of Xanthoma Multiplex; by Dr. Wilks on a case of Sudden Death after Needle Puncture for Supposed Empyema, with specimen; by Mr. A. H. Tubby on Osteomyelitis of the Spinal Column; and by Dr. Leader on a case of Hodgkin's Disease.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—The annual meeting of this society was held at the Royal Infirmary on June 20th, Dr. C. F. M. Althorp, the President, being in the chair.—Dr. W. Mitchell read the annual report.—The following officers were elected for next session: President: Mr. W. Handcock. Vice-President: Dr. A. Mantle (Halifax). Honorary treasurer: Dr. H. J. Campbell. Honorary secretaries: Dr. T. J. Wood and Dr. Mitchell. Honorary librarian: Dr. Althorp. Honorary pathologists: Dr. F. W. Eurich, Dr. Phillips, and senior house physician, Royal Infirmary.—Dr. J. Metcalfe then proposed the following motion:—

That this society do amalgamate with the Bradford division of the British Medical Association and that arrangements as to time and method be either left to a duly appointed subcommittee or decided by this meeting forthwith.

Dr. Metcalfe pointed out the following advantages likely to accrue from amalgamation: (1) that the profession in Bradford would be more united and consolidated than it was at present and would therefore have more influence when called upon to support the honour and interests of the profession; (2) that there would be effected a saving to each member of about 3*s.* per annum; and (3) that there would be fewer meetings necessary were they united than if they existed as separate societies as at present, each society now being under the necessity of holding so many meetings of its own.—Dr. Campbell seconded the motion and pointed out that the Bradford division of the British Medical Association was in danger of degenerating into a merely political and ethical society unless more support were given to the scientific section.—Dr. T. W. Hime opposed the motion and pointed out (1) that the proposed amalgamation would not really be amalgamation but absorption of the society into the British Medical Association; (2) that an amalgamation at present would be virtually signing the death warrant of a society which had achieved 40 odd years of honourable work and traditions, without any certainty that the division could afford them equal privileges and freedom of control; and (3) that all the advantages held out were only hopes and that even the saving of 3*s.* per annum to each member was not a certainty.—There also spoke Dr. R. Mercer, Dr. Johnson, Mr. Vaughan Bateson, Dr. A. Bronner, Dr. Rabagliati, Dr. Wood, Dr. A. H. Bampton, and Dr. Eurich.—The motion was defeated by 44 votes to 23—a majority of nearly 2 to 1.

Reviews and Notices of Books.

Paralysis and other Diseases of the Nervous System in Childhood and Early Life. By JAMES TAYLOR, M.A., M.D. Edin., F.R.C.P. Lond. London: J. and A. Churchill. 1905. Pp. 512. Price 12*s.* 6*d.* net.

Dr. James Taylor has succeeded in presenting within moderate compass an excellent account of diseases of the nervous system as they are met with among children. He describes the various conditions in simple and well-chosen language and the descriptions are illustrated with numerous reproductions of clinical and pathological photographs. Little space is taken up with discussions of disputed points. As is explained in the preface, the work is an expression of the writer's personal observations modified and extended by his knowledge of the views of others. The point of view is mainly clinical. An adequate and clear account of known morbid changes is given wherever the present state of our knowledge admits but long discussions of controverted points in pathology are omitted. The allotment of space to the various diseases has been, on the whole, judiciously adjusted, the more common forms being treated at length so as to permit of full depiction of the numerous variations which the same disease may present in different individuals. Thus meningitis, infantile hemiplegia, cerebral diplegia, hydrocephalus, intracranial tumour, infantile spinal paralysis, epilepsy, and the various forms of muscular dystrophy are exhaustively dealt with. At the same time there is an adequate and interesting account of many rare conditions such as myoclonus, hereditary cerebellar ataxy, myasthenia, family periodic paralysis, and so on. Such common affections as chorea, stammering, and night terrors are also the subjects of attractive chapters. There is such a generally high standard of excellence that there is little to provoke criticism. The chapter on syringomyelia, however, excellent as it is, seems rather dragged in when included in a work on children's diseases, and the same objection applies to the introduction of Huntington's chorea. We think that in a future edition the 20 pages of space devoted to these subjects might be given to other ordinary subjects. The book would gain by a description of migraine in young subjects and a most useful chapter might be given on the nervous symptoms accompanying and following acute febrile diseases, such as measles, pneumonia, enteric fever, and whooping-cough. Further, in a revised edition, there should be uniformity with regard to the use of the adjective denoting the presence of the bacillus tuberculosis, which sometimes appears as "tuberculous" and sometimes as "tubercular." The latter form should not now be used in that sense.

But apart from these friendly suggestions we have nothing but praise for the matter of the work and for the way in which it is presented. The style throughout is clear and very readable, remarkably so considering the complexity of the subject. The descriptions are liberally illustrated by well selected clinical cases and the numerous clinical and pathological photographs are well chosen and beautifully reproduced. Altogether we can congratulate Dr. Taylor on the production of a well-written book which will be useful alike to the busy practitioner and to the neurologist.

Principles of Physiological Psychology. By WILHELM WUNDT. Translated from the Fifth German Edition (1902) by E. B. TITCHENER, Sage Professor of Psychology in the Cornell University. Vol. I. With 105 figures in the text. London: Swan Sonnenschein and Co., Limited. 1904. Pp. 347. Price 12*s.*

THE present volume covers the first 338 pages of the well-known work of the professor of philosophy in the University of Leipsic, being the Introduction and Part I., On the Bodily Substrate of the Mental Life. The complete work consists of six parts. Some 28 years have elapsed between the publication of the first and fifth editions of the work. The author considers that when first he published his book Fechner's "Elemente der Psychophysik" constituted the only successful attempt to apply exact procedure to psychological problems. To-day accuracy of method is freely applied in this domain and workers therein are no longer challenged to prove that their endeavours are legitimate. There is a lengthy introduction to the work, comprising a philosophical survey of the subject of physiological psychology, which science is shown to involve the application of experiment and a knowledge of the bodily substrata of the mind. The reform which it seeks to accomplish in psychological investigation is compared with the revolution brought about in the natural sciences by the introduction of the experimental method. It is necessary to remember that physiological psychology is primarily *psychology*. The six chapters of this volume deal with the Organic Evolution of Mental Function, the Structural Elements of the Nervous System, the Physiological Mechanics of Nerve Substance, the Morphological Development of the Central

Organs, the Course of the Paths of Nervous Conduction, and the Physiological Functions of the Central Parts. The criteria of mind and the range of the mental life find consideration under the first of these headings. Consciousness, in the sense of "continuity of internal states," is, it is maintained, a universal possession of living organisms from man to the protozoa. The manifestations of life, even among the lowest protozoa, are only explicable on the hypothesis that they possess a mind. The author regards it as a highly probable hypothesis that the beginnings of mental life may be dated back to the beginnings of life. The development of the nervous system is sketched at this stage and its morphological elements are described. The usefulness of the neuron theory as a working hypothesis is recognised, whilst due mention is made of the opposition which it finds, though it does not seem to us that the reasons for that opposition, so far as they depend upon the work of Apáthy and Bethe upon intracellular structure, are adequately set forth.

The functions attributed to the various constituents of the nerve cell and to its processes are discussed. Referring to the amœboid movements of the dendrites, the author very properly dismisses as imaginary the psycho-physical explanations of sleep and waking, dissocintion of consciousness, and the like, that certain authors, chiefly Italian, have erected upon them. A consideration of the general principles and problems of a "Mechanics of Innervation" and of the course of the processes of stimulation in the nerve-fibre leads up to the development of a theory of nervous excitation. This is based upon a supposed molecular state of nervous substance in which positive and negative molecular work are in performance simultaneously. The action of stimulus-shock upon this state is elaborately discussed. As between nerve cell and nerve fibre the difference is pointed out, that the characteristic of the latter is to form products of combustion associated with positive work, whereas the cell is concerned with the production of highly complex bodies in which potential work is stored. The chief consumer of this store will be the peripheral nerves and their organs. There follows here a description of the physiological relationship obtaining between the central substance and the nerve fibres.

Chapters IV., V., and VI. deal almost entirely with the morphological development, anatomy, and physiology of the nervous system. The subject-matter of these parts, covering 240 pages, is in the main familiar to the student of the nervous system. The anatomical description closes with an account of the structure of the cerebral cortex. It is shown that whilst the essential morphological elements and their general arrangement are the same for all parts there are different degrees of development of certain layers and elements according to the special function of the various parts. In particular the probable symptomatic importance of two kinds of cell is pointed out: the pyramidal cells, with their longitudinally-directed fibres, and the stellate cells with their fibrillar reticula, the former characteristic of the centro-motor region and serving as points of departure of the great centrifugal nerve-paths, the latter of the sensory regions, and probably serving mainly as terminal stations of centripetal conduction. Then in all regions of the cortex the outermost layer with its reticular formation seems to form a meeting place for conduction-paths of the most varied kinds. In reference to the much-disputed question whether the different cortical regions possess a specifically different structure which may serve as a basis for discrimination of faculties, the researches of Ramon y Cajal and others are regarded as leading to the conclusion that the different modes of cerebral activity are founded not upon the specific character of the structural elements but solely upon their different modes of connexion. The general principles of the processes of central conduction are sketched, such as the principle of manifold representation of peripheral regions at the centre and that of the ascending complication of conduction paths. The functions of the nervous system are sufficiently dealt with, as deduced from operative procedure, comparative anatomy, and anthropology. The hypotheses of localisation, the "sense-centre" theory of Meynert, and the modern association theory are admirably discussed. The last few pages give illustrations of the psycho-physical analysis of certain cerebral functions; as was to be expected, the author's theory of apperception and an apperception-centre is set forth and upheld against the opposition it has encountered.

The difficulty of translation of such a work as the above, already great from the nature of the subject, must have been considerably enhanced by Professor Wundt's style, often described as diffuse and obscure. Professor Titchener is greatly to be congratulated on his task. It is to be hoped that the remaining parts of the last edition of this great work may be translated ere long.

Physiological Economy in Nutrition, with special reference to the Minimal Proteid Requirement for the Healthy Man. By RUSSELL H. CHITTENDEN, Professor of Physiological Chemistry in Yale University. With 16 photographic reproductions of athletes and groups of soldiers. London: William Heinemann. 1905. Pp. 478. Price 14*s*.

THE name of Professor Chittenden is itself a guarantee of the accuracy of this experimental research which goes far to modify profoundly the usually accepted standards as to the minimum amount of proteid required in a so-called standard diet. No subject can be primarily of greater physiological importance for the welfare of the human race than the subject of nutrition. How is the highest condition of health and strength to be established? Even physiologists vary greatly in their estimates as to the true physiological necessities of the body for proteid foods. The standard of diet generally accepted for an adult man of average body weight (from 70 to 75 kilogrammes) doing a moderate amount of work is that of Professor Carl Voit of Munich: proteids, 118 grammes, of which 105 should be absorbable; carbohydrates, 500 grammes; and fats, 56 grammes, with a total fuel value of 3000 large calories, to keep the body in equilibrium.

Average Diets.

—	Moleschott.	Ranke.	Forster.	Hultgren and Landergren.	Atwater.	Stoelemund.	Schmidt.
	grms.	grms.	grms.	grms.	grms.	grms.	grms.
Proteid ...	130	100	131	134	125	114	105
Carbohydrates ...	550	240	494	523	400	551	541
Fats ...	40	100	68	79	125	54	63
Fuel value (calories)	3160	2324	3196	3436	3515	3229	3235

These figures show the dietetic standard and the dietetic habits adopted by mankind but there is no evidence that they represent the real needs or requirements of the body. There is experimental evidence to show the possibility of much lower standards of diet sufficing to meet the real physiological needs of the body. Thus Kumagawa, studying the diet of the Japanese, experimenting on himself (27 years old and weighing 48 kilogrammes), found with a purely vegetable diet containing per day 54·7 grammes of proteid, equal to 8·75 grammes of nitrogen, 2·5 grammes of fat and 569·8 grammes of carbohydrate, that the average daily excretion of nitrogen by the urine was 6·07 grammes and in the

fæces 2·03 grammes—i.e., of the 54·7 grammes of nitrogen-containing food (chiefly rice) only 37·8 were absorbed and 12·7 passed out with the fæces. The total fuel value of the food absorbed per day was 2478 large calories. It is self-evident that the smallest amount of food that will serve to keep the body in a state of high efficiency is physiologically not only the most economical, but as the products of proteid metabolism are a constant menace to the well-being of the body both Scylla and Charybdis are avoided by reducing the amount of proteid to the limits of safety.

The singularly elaborate and fully detailed experiments carried out during many months on professional men, on soldiers of the Hospital Corps of the United States Army, on trained athletes of the American universities, make it plain that our accepted dietary standards are altogether too high and conclusively prove that the physiological needs of the body can be met by a greatly reduced proteid intake, with establishment of continued nitrogenous equilibrium, and with actual gain to the body. This, moreover, can be accomplished without increase in the daily intake of non-nitrogenous foods.

The careful analyses of the daily dietary, of the various excreta, all scheduled in a tabular form and occupying many pages of elaborate data justify, we think, completely the general conclusion regarding the professional class "that a healthy man whose occupation is such as not to involve excessive muscular work but whose activity is mainly mental rather than physical, can live on a much smaller amount of proteid food than is usually considered essential for life without loss of mental or physical strength and vigour and with the maintenance of body and nitrogen equilibrium." The ordinary professional man need not clog his system and inhibit his power of work by the ingestion of any such quantities of proteid food as the ordinary dietetic standards call for and "he may practise an economy in the use of proteid food equal to a saving of one-half to two-thirds the amount called for by existing dietary standards and without increasing the non-nitrogenous food consumed."

The results obtained with a body of United States soldiers living on a prescribed diet and exposed to the stress and strain of military discipline confirmed the results arrived at in the case of professional workers. A metabolism of less than 50 grammes of proteid per day was quite sufficient for the needs of the body and a fuel value of from 2500 to 2800 calories was ample to meet the requirements of these men. Why, therefore, metabolise 105 grammes of proteid per day? This condition of lowered proteid metabolism was maintained for five months in 13 soldiers on amounts of proteid food not more than one-half called for by ordinary standard dietaries and this without increase of non-nitrogenous food. While their body weight, nitrogen equilibrium, physical strength and vigour, reaction time, and general composition of blood "all remained unimpaired under a daily diet involving the metabolism of only seven to eight grams of nitrogen per day and with a fuel value of less than 2800 calories per day." Indeed, such economy led to improved working of the neuro-muscular machinery, while all the subjects of the experiment were less conscious of fatigue than formerly. No facts are in evidence to show whether the power of resistance to disease is diminished in any way by a low proteid intake.

Undoubtedly, some of the products of proteid katabolism are more or less dangerous to the well-being of the organism; hence there seems additional justification for the belief that "safety" lies in adopting dietetic habits that are in accord with the real needs of the body.

The author makes a powerful appeal—or rather reiterated appeals, for the same statements recur—for what may be called a simple mode of living—if the phrase "simple life" has become too hackneyed. Physiological economy is not restriction to a vegetable diet, it is not even prohibition, but temperance. "Moderation in diet, especially in the taking of proteid foods, means a great saving in the wear and tear of the bodily machinery." The whole story may be summed up in the statement that in general man eats far too much proteid or albuminous food.

This is a work—a careful experimental research—that must attract the attention and the careful consideration not only of the physician and the physiologist, but it also claims the attention of the economist and the sociologist. To all of these we commend its careful perusal and we feel convinced that few who read the elaborate record of this careful chemical and exhaustive research will fail to agree with its fundamental proposition—viz., the question of intemperance in the daily dietary, more especially as regards the consumption of proteids.

Radiotherapy and Phototherapy, including Radium and High Frequency Currents. By CHARLES WARRENNE ALLEN, M.D., Professor of Dermatology in the New York Post-graduate Medical School, &c. London: Henry Kimpton. 1905. Pp. 618. Price 22*s.* 6*d.* net.

THE author's aim has been to produce a handy volume dealing with all the subjects referred to in its title for the use of students and practitioners. It may be fairly conceded that he has been successful. The work is divided into seven parts, the first of which relates to general considerations upon radiology, apparatus, and technique. All necessary information and instruction are here given, with a notable absence of redundant material.

Part II. deals with the use of the x rays in medical and surgical diagnosis—a separate chapter being devoted to each. Part III., the longest and most important section, treats of the therapeutic applications of the x rays. Under "General Considerations" the author is very insistent on "the necessity of having trained and intelligent medical men in charge of all treatments." No electrician, however skilled in physics or even a knowledge of radiotherapy, should be considered a competent therapeutist. It requires good medical and clinical training, and tact besides, to enable one to safely and successfully conduct x ray therapeutic applications, and, while it is all the better if the radiotherapist is at the same time a practical electrician, it is absolutely necessary that he be a finished clinician." We commend the above to the consideration of those who think that anyone knowing how to manipulate a few switches can practise radiotherapy with success.

In the treatment of cancer the author indicates a desirable coöperation between the radiotherapist and the surgeon. In inoperable cases he advises the removal of as much as possible of the cancerous mass by the surgeon, relying on the x rays to attack and to destroy what remains. Separate chapters are devoted to cancer, epithelioma and rodent ulcer, sarcoma, and skin diseases—the last forming, as might be expected, one of the best chapters in the book. The author is essentially a dermatologist and he has well maintained his reputation here. Details of many cases are given and the illustrations are exceptionally clear and well produced. The x ray burn and other deleterious effects of the x rays are fully described and the histological changes and action on bacteria are dealt with in separate chapters.

Part IV., on Light, opens with a chapter entitled "Therapeutic Indications for the Employment of Light," and is remarkable on account of the entire absence of anything bearing on its title, dealing as it does almost entirely with the historical aspect of the subject. The physical properties of light next receive attention and later the action of light on bacteria is treated in a full yet concise manner. The section closes with a chapter on general phototherapeutics. This part is really an introduction to the next one entitled "Actinotherapy," in which the various methods and the diseases to which they are applicable are all treated in greater detail.

Part VI. is made up of a single chapter on radio-activity.

It forms an excellent epitome of all the literature up to date bearing on radio-active substances and their application to the treatment of disease.

The final section is devoted to high frequency currents. It takes up the concluding 50 pages of the volume and contains all that is really known of the subject up to the present time. In summing up the author considers that in high frequency currents we have a therapeutic agent that will be more appreciated as time goes on. He considers, and many will agree, that in local applications this form of electricity has shown its greatest field of usefulness.

The book is well got up and well illustrated. It is sure to prove a very handy and valuable volume to those who are interested in these branches of physical therapeutics.

LIBRARY TABLE.

Précis d'Accouchement. Par Dr. LOUIS DUBRISAY, Ancien Chef de Clinique à la Faculté de Paris, et Dr. CYRILLE JEANNIN, Chef de Clinique adjoint à la Faculté de Paris. With 113 figures. Paris: F. R. de Rudeval. Pp. 736. Price 9 francs.—In preparing this work the authors have endeavoured to make it essentially clinical and practical in character. They have treated in especial detail the various methods of treatment and the different operative procedures recommended. Questions of less importance are discussed more briefly, but they are all duly considered and the work is a complete treatise on the art of obstetric medicine. It is divided into two parts: the first is concerned with the physiology of pregnancy, labour, and the puerperium, whilst the second deals with the pathology of these three conditions. The book is written in a clear and simple manner and the authors make frequent use of short paragraphs and tables. In many instances it is especially full, as for example in the section dealing with the care of premature infants, and it will no doubt prove of value to the students for whom it is written.

The Nutrition of the Infant. By RALPH VINCENT, M.D. Durh. Second edition, revised and enlarged. London: Baillière, Tyndall, and Cox. 1904. Pp. 321. Price 10*s.* 6*d.*—A review of the first edition of this work appeared in THE LANCET of March 19th, 1904, p. 808. In its present form we notice few alterations of importance although the author with an extended experience of the laboratory method of preparing milk mixtures is more strongly convinced than ever that this method is the best. As the result of employing so scientific and exact a method as that which Dr. Vincent relies upon in his practice and describes in his book this conclusion is exactly what was to be expected. By employing accurate formulæ and measuring the amounts of the various ingredients employed in the preparation of the milk mixtures it is possible to keep a systematic record of the dietary and of the results achieved. This is, we take it, the only rational means of gaining a progressive knowledge of the feeding of infants. It is not so important to have a perfect food as to have a useful experience of the best methods of employing the material with which we have to work. Those who employ haphazard methods and despise the so-called percentage method of feeding or, in other words, the use of weights and measures, are very unlikely to obtain uniformly good results, or even to advance in the clinical knowledge which is necessary for the satisfactory feeding of infants. They may, indeed, occasionally obtain brilliant results but there will be no uniformity in their achievements. Nevertheless we cannot help thinking that Dr. Vincent is too restricted in his dietetic resources and, further, that he is too severe on certain of the expedients employed by clinicians of great experience in the feeding of infants. For instance, he describes all sugars other than milk sugar as foreign bodies and he denies to carbohydrates a position among the foods, and, further, he seems to think that the boiling or sterilisation of milk deprives it of most of its virtues and that its use necessarily leads to rickets, scorbutus, or some other manifestations of malnutrition. As with laboratory milk so with sterilised milk, success or failure depends more on the manner in which it is employed than on the character of the milk *per se*. We imagine that few authorities would claim that sterilised milk was better adapted for the purpose of infant feeding than pure, fresh milk, but probably most people would consider that it has advantages over milk which is seriously contaminated by micro-organisms. In most respects, however, we consider that the views which Dr. Vincent has expressed in this volume are thoroughly sound; at any rate, he advocates a method which is capable of great refinement and nice adjustment, and one which is calculated to give progressively better results as the man who uses it progresses in clinical experience and in a knowledge of the practical applications of variously modified milks.

New Inventions.

IMPROVED HIGH POTENTIAL APPARATUS IN ELECTRO-THERAPEUTIC APPLICATIONS.

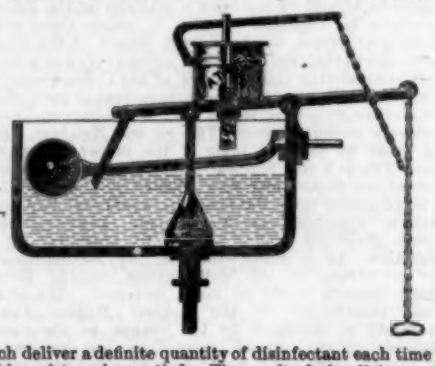
DAY by day further additions are made to the electro-therapeutic armamentarium and as the applications increase it is desirable that whilst the equipment should be comprehensive it should also be made as convenient and compact as possible. It would be a great gain, for example, if with one apparatus all the applications of the electric current—e.g., x ray work, high frequency currents, sinusoidal currents, vibratory massage and other mechanical work, and small lamps, cauteries and so forth—could be made. Further the apparatus should be available either with the continuous or alternating current from the main. An apparatus practically fulfilling all these requirements

and occupying but a relatively small space was shown by Messrs. Isenthal and Co., of 85, Mortimer-street, London, W., at the recent conversazione of the Royal Society where it naturally attracted the interest of the medical visitors. The upper part of the apparatus, which is known as the Grisson resonance apparatus, is shown in the accompanying illustration. The reverser situated at the base of the

rheostats and switches and protected by a guard rail is built in the form of a modified commutator with two plain slip rings upon which four brushes bear, those for the commutator being adjustable laterally and angularly. It is driven by means of a quarter horse power semi-inclosed electric motor, a flexible coupling being interposed, and the speed is regulated by a rheostat. The free end is fitted to take flexible shafts for surgical instruments, vibrators, &c. The reverser dispenses with the interrupter of the old induction coil and has the very distinct advantages that it works without sparking, contains no mercury to "sicken," and no expensive platinum contacts to burn. The condenser may be charged from one to 200 times per second, giving with the resonance coils anything up to 1000 sparks per second between the terminals of the coil. The condensers are situated in a cupboard (not shown in the picture) beneath the upper part of the apparatus and consist of two or more steel vessels fitted with a terminal. The lid carries two folded aluminium plates kept in position by glass insulated uprights fixed to a false bottom in the cell in such a way as to make short circuits an impossibility. The dielectric is only a minute fraction of a millimetre in thickness, being represented by a film of aluminium hydroxide formed electrolytically on the surface of the aluminium plates. The electrolyte is a special alkaline solution. The capacity is enormously increased by adopting such an extremely thin separating dielectric. It exceeds for each condenser 100 microfarads at a charging potential of 110 volts and 50 periods and will discharge on a 100-volt circuit at a rate up to 15 ampères through the coil. The resonance coil has no condenser and gives sparks up to 16 inches in length and of immense magnitude. The coil is said to be equal in efficiency to an ordinary coil of 28 inch spark-length worked with an interrupter. The reserve of energy in the Grisson resonator amounts, it is stated, to more than 100 per cent. The resonance coil acts by suddenly forcing current through the primary coil in a succession of impulses. The equipment includes a very ingenious arrangement of controlling gear with coarse and fine adjustment rheostats for the primary or alternating circuit, control lamps for the condensers and magnet, hot wire ammeter for primary circuit, change-over switches, fuses, and double pole switches. The controlling gear may be mounted on a wall, switchboard, or attached to a cabinet as shown in the illustration. This cabinet is designed for x ray work, high frequency, electromagnetic therapy, vibration, cautery, sinusoidal currents, &c. One important feature of the apparatus is the simple manner in which its working may be controlled and the operating of the switches for the various applications is free from complication while the chances of "turning on the wrong tap" are reduced to an impossibility by the special disposition of the connexions. There is a rheostat for the motor and until this is in operation no effects, of course, are obtainable.

AUTOMATIC DISINFECTANT DELIVERY MACHINE.

FROM time to time a number of appliances have been devised providing for the automatic discharge of a disinfectant into the water used for flushing the water closet and those succeed best which are simple in construction and



which deliver a definite quantity of disinfectant each time the flushing cistern is emptied. The merit of simplicity as well as efficiency certainly belongs to the apparatus of the Automatic Disinfectant Delivery Machine Company, Limited, of 2 and 4, Tudor-street, London, E.C. The manner of working of the apparatus will readily appear from the accompanying illustration. A small metal container is fastened by means of a thumbscrew to the top of the cistern. A valve in this container is operated by a chain attached to the chain of the cistern itself. When the cistern chain is pulled the valve of the disinfectant container is opened and a measured volume of the fluid is released which, mixing with the flush, provides an effective disinfecting "wash down." It is a decided advantage also that the method leaves in the trap and pan a quantity of disinfecting fluid so that any return gases that may escape would be submitted to the action of the disinfecting agent. The fluid used in the model with which we made a practical trial appeared to consist of an alkaline mixture of phenols and pine oil but obviously any other fluid may be used for the purpose. The disinfectant container, of course, requires to be filled at intervals, but for ordinary purposes it holds sufficient disinfectant for a month's use. Assuming that the addition of a disinfectant fluid to excreta is desirable, this plan seems to be a very convenient and satisfactory way of effecting that end.

MEDICINE, ITS PRACTICE AND ITS PUBLIC RELATIONS.

CHAPTER XIX.[1]

THE AMENDMENT OF THE MEDICAL ACTS.

The Constitution of the General Medical Council.—The One-Portal System.—The Legal Prohibition of Quackery.

MEDICAL organisation, however perfect, and public opinion, however sympathetic, will not accomplish the removals of all the evils that have been displayed. They would do a great deal and would pave the way for more but the law of the land expressly permits a state of things which cannot be altered by any united effort on the part of medical men, be it ever so kindly received by the people. As long as there are over 20 ways of entering the medical profession so long will there be a certain amount of disorder in medical education and jealousy in the ranks of medical practitioners; and as long as the only existing legislation against quackery is limited to the imposition of a small fine for falsely pretending to be a medical man, so long will the charlatan, run riot amongst us. As both the disorderly condition of medical education and the impunity of quackery depend upon the wording of the Medical Acts it is not surprising that all medical reformers have put in the front of their programme the amendment of these Acts. The suggested amendments are usually as follows: (1) the alteration of the *personnel* of the General Medical Council so as to make it a more representative body; (2) the institution of one State examination by which the medical profession must be entered; and (3) the legal prohibition of medical practice by persons not registered as medical men. We may consider the amendments in that order.

1. *The Alteration of the Personnel of the General Medical Council.*

The General Medical Council, as the Council is at present constituted, is not representative of the medical profession. It has been generally assumed that, if its constitution were altered until the Council was more representative in character, its deliberations would be of a more practical sort, while, its intimacy with the troubles of the general practitioner being greater, it would be more capable of bringing public needs into line with medical service and of interpreting professional views so that laymen would recognise their justice. These things and more have been assumed on apparently good grounds, but it must be remembered that until a reconstituted Council has actually taken over the work to be done assumption is all that we have to go upon.

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII. XIII., XIV., XV., XVI., XVII., and XVIII. were published in THE LANCET of Feb. 18th (p. 447) and 25th (p. 517), March 4th (p. 593), 18th (p. 736), and 25th (p. 817), April 1st (p. 877), 15th (p. 1017), 22nd (p. 1099), and 29th (p. 1151), May 6th (p. 12/8), 13th (p. 1287), 20th (p. 1375), and 27th (p. 1449), June 3rd (p. 1533), 10th (p. 1594), 17th (p. 1651), and 24th (p. 1741), and July 1st (p. 43), 1905, respectively.

The General Medical Council is at present made up of 32 persons, five of whom (three for England and one each for Scotland and Ireland) are elected by the registered practitioners resident in the different countries, four of whom are nominated by the Crown, and 23 of whom are chosen by the governing bodies of the 22 universities and corporations the medical tests of which admit to the Register. The universities and corporations enjoy, therefore, a very powerful position. In many directions their interests must be identical, and where those interests clash with the interests either of the medical profession at large or of the public an effective combination could be made to uphold the teaching bodies. Such an abuse of position is not as likely to occur as some would have us believe, but the question is whether it can be made a complete impossibility. The numerical ratio of Crown members and direct representatives to that of the representatives of the universities and corporations can be raised either by adding to the former or subtracting from the latter. But there are valid objections to either course. The General Medical Council is in the opinion of good judges, persons who are, or who have been, influential members of the Council, too large already. The deliberations of the Council are hampered by its size and the expense of the sessions is increased. But to take away from any of the universities or corporations their right to a representative is a serious step. The British Medical Association has prepared a Bill for amendment of the Medical Acts in which this course has been adopted in a drastic manner. The examining bodies are to send only nine representatives instead of 23. The University of Oxford and the University of London, the University of Cambridge, and the University of Birmingham, Trinity College, Dublin, and the Royal University of Ireland, the University of Edinburgh, and the University of St. Andrews under this scheme are to be bracketed together and alternately disfranchised, while the representation on the Council of the corporations is to be curtailed still more rigidly. The number of direct representatives is to be increased from five to eight and a dental representative is to be added. In this way the *personnel* of the Council is changed from 32 to 23, while the representatives of the examining bodies can be put in a minority by unanimous action on the part of the Crown members and the direct representatives. The attempt to reduce the numbers of the Council so made is a brave one but the deprivation of certain examining bodies, though only temporarily, of their votes is a step so serious that it must certainly provoke opposition. To take the educational function of the General Medical Council into consideration alone, it would be clearly inadvisable that a debate should be held upon the educational standards of a university or a corporation without there being present at the Council table a representative of the body in question. On the other hand, to increase the General Medical Council until a combination of the representatives of the examining bodies could not outvote the rest of the Council would mean adding 12 more members at least as Crown representatives or direct representatives. And addition could not end there, for the examining bodies tend to increase in number—the University of Birmingham, for example, obtained a representative in 1903 and Liverpool one in 1904, while the University of Wales, the University of Leeds, and the University of Sheffield will presumably have the same privilege granted to them shortly. Each such addition must be counterbalanced if the chance of abuse of power on the part of the educational bodies is to be removed, and the Council would tend to become in the end an unwieldy body.

The difficulties involved in alteration of the numbers of the Council have led to the suggestion that the medical profession as a whole might be more adequately represented upon the Council if the representatives of the qualifying bodies were chosen by the vote of the members of the corporations, or by the medical graduates of the universities, instead of being delegates from the respective ruling bodies of the universities and corporations. Undoubtedly if the representatives of the educational bodies were chosen by the votes of the constituency at large the general practitioner would feel himself much more fully in touch with the disciplinary body of the profession. He would have a vote for the election of his own representative, which is in accordance with all popular notions of reform, but there is none the less a good deal to be said against the idea. The university graduates (at any rate an ascertainable portion of them) do not ask for the privilege of voting for their representatives on the General Medical Council, while the charters of the corporations appear to vest the power of appointment of a representative on the Council in their governing bodies. Before the reform can take place these charters must be abrogated. Again, elections are a weariness to the voters, as is shown by the small number of medical men who register their votes at the comparatively infrequent elections for direct representatives on the General Medical Council. Elections also impose much trouble and annoyance upon candidates and it would not be easy in all instances to secure the candidature of the best man, because he would not care to submit himself to the worries and personalities of an election. It may be all in a day's work for a politician, but a medical man is not inured by his professional life to being called, even by implication, a time-server, an anarchist, or an idiot, which might be the fate of any candidate who happened to seek election to the General Medical Council at a time when medical opinion was divided and feelings were running high. We have only to refer to the incidents of the election for direct representatives in 1901, when the registration of midwives was on the *tapis*, to feel certain of this. A large section of the medical profession at the time was bitterly opposed to the suggested legislation and the amenities of debate were considerably strained by the champions of either side. This acrimony could again be caused by the public discussion of many topics of politico-medical or ethico-medical interest and a series of elections might come to mean a series of rows. Besides it is, to say the least, doubtful whether the medical profession would be better served if the representatives of the various examining bodies were to be selected by the whole constituency. Such a body as the Council of the Royal College of Surgeons of England, for example, is sure to be represented under existing methods by a tried and capable official—a past examiner familiar with educational theory and routine, a man who can carry weight among his colleagues on the General Medical Council. His qualities are known *au fond* by the Council of his College before the interests of the College are confided to him. But if the Fellows and Members of the Royal College of Surgeons of England, a constituency of 18,000 persons, were allowed to select one man among them as a representative the chances of their choosing the man who asked most urgently for their suffrages and who was most prolific of promises would be great. And similarly great would the chances be that such a representative would turn out a failure on taking his seat at the Council board. I have selected the Royal College of Surgeons of England as an example, because it is a very large constituency, numbering over 18,000, governed by a very small body which, in its turn, is elected by an upper class numbering about 1200—that is to say, that 17,000 Members of the College have no voice in the election of their representative on the General Medical Council either directly or indirectly.

There is a way out of this position. The Council which chooses the representative might itself be elected by the 17,000 Members and not by the 1200 Fellows—a liberal development that has for three-quarters of a century been urged by THE LANCET. And in a similar way the General Medical Council might be liberalised throughout. The Council of the Royal College of Surgeons of England is understood to have no serious objections to the change of constitution by which it would itself become a representative body, and at one time a majority of the Fellows, who might be expected to wish to retain their constitutional prerogative, was actually in favour of the reform. THE LANCET aided the movement unceasingly and a decade ago it seemed that the Members of the College were in a fair way to obtain a share in the management of their affairs, but the untactful behaviour of a few "whole-hoggers" ruined the *entente cordiale* between Fellows and Members. Relations could be renewed again if the proper course were taken. This is a very suggestive fact, for if the governing bodies of the corporations were selected by the members of the corporations then the members would feel that representatives appointed to the General Medical Council by such governing bodies were really appointed by the corporations as a whole—that is, by themselves—and their confidence in the deliberations of the General Medical Council would be much increased. The change in the constitution of the General Medical Council that would be produced by the change in the election machinery of the various universities and corporations need not be great, but it would be a wise and good reform, because it would give the General Medical Council more the character of a popularly elected body. To proceed further in making the Council popularly elective would be to call

upon the members of the profession to go frequently to the hustings, and this they would not do, nor is it certain that the best candidates would seek their suffrages.

2. *The One-Portal System.*

We come next to the proposal that all medical men should enter the medical profession after passing one State examination. The "one-portal system" has been desired ardently by some of the most liberal thinkers as doing away with all possible opportunities that some students may enjoy for entering the medical profession upon easier terms than their fellows; and the British Medical Association has provided in its new Bill for a State examination to precede admission to the Register. The simple way of securing a one-portal system that would give satisfaction to the medical profession would be for the State to hold identical examinations in certain capitals and university towns simultaneously and to admit the successful candidates to the Medical Register under the title of M.D., or at least with the clearly specified right for each man to call himself "Doctor." As far as the public would be concerned all medical men would then be equal, and any favour which a man enjoyed with the public would be due to his work and his character. Appointments would no longer be open only to graduates of certain universities or diplomates of surgery of certain corporations. Every candidate for a post could produce, as additional evidence of fitness, any testamurs that he possessed, but the non-possession of them would bar no man from competing. The London student, working in the splendid clinical field of the metropolitan hospitals with the elaborate scientific environment of a metropolitan medical school, when entering private practice would no longer find himself described as "not a real doctor" because he did not possess a university degree. All medical men would be equal in the eye of the public and the substantial grievance under the present *régime*, that of two equally well-informed men one has and the other has not an academic right to the popular title of "Doctor," would disappear. Is there anything to be said against so simple a reform, so sure a way of making medical education uniform, so obvious a way of avoiding a multiplicity of examinations, so complete a way out of the difficulties that have arisen from the use of the word "Doctor" as a popular style as well as an academic title? Unfortunately, there is another side to the question; the institution of a State examination to the medical profession would probably be opposed by the medical corporations. The Universities might have nothing to say against the immediate adoption of such a system but the corporations would be likely to take an opposite view. A student commencing his medical career at a university would naturally desire to graduate in medicine at that university. He would pass any examination additional to the State examination and pay any fees additional to the State fees, so that he might receive the hall-mark of his *alma mater*. But the student not entering the medical profession by way of a university, having passed the State examinations in medicine, surgery, and obstetrics, and having obtained a place on the Medical Register with the right to style himself "Doctor," would have little inducement to seek from a College or a Hall any Diploma? The honour diplomas or fellowships might still command candidates, but the rank and file of the medical profession would hardly consent to pay fees for pass diplomas when they already possessed the legal title of "Doctor." The corporations would probably suffer considerably, so that a one-portal system would have far-reaching consequences of a sort that must provoke opposition. And very awkward opposition, too, for the presidents and office-bearers of the Royal Colleges have a way of being the friends as well as the medical advisers of those who make the law of the land, and an amendment to the Medical Acts which the Royal Colleges decided to oppose would have but small chance of becoming law. A final examination of all students, wherever educated, for the right to a place on the Medical Register with the title of "Doctor" has so long been the conception of the reformer that the idea cannot be given up without reluctance; indeed, it should not be given up altogether, but those who hope for it will surely have to exercise patience, for no such reform will immediately be granted.

3. *The Legal Prohibition of Medical Practice by Persons not Registered Medical Men.*

Such a prohibition would be to do away with the impunity now enjoyed by quacks and would necessitate an alteration of the Medical Acts of a decided sort. The Medical Act of 1858 in its opening clause says that the Medical Register is to enable the public to ascertain who is and who is not a *bonâ-fide* medical practitioner, but it leaves the public to choose between the qualified man and the quack, merely supplying the necessary information so that the choice need not be made blindfold. The State recognises nothing but the qualified man. Only he can give a death certificate, or medical evidence, or express a medical opinion of any sort that will carry legal weight. But anyone in this country can practise medicine and practise it for gain; the law will only interfere with a man who says he is a registered medical practitioner under the Act when he is nothing of the sort, or who pretends to have a legal position as a medical man. The amount of that interference is shown by Clause XL. of the same Act, which runs as follows:—

> Any person who shall wilfully and falsely pretend to be or take or use the name or title of a physician, doctor of medicine, licentiate in medicine and surgery, bachelor of medicine, surgeon, general practitioner or apothecary, or any name, title, addition, or description implying that he is registered under this Act, or that he is recognised by law as a physician, or surgeon, or licentiate in medicine and surgery, or a practitioner in medicine, or an apothecary, shall, upon a summary conviction for any such offence, pay a sum not exceeding twenty pounds.

It is quite clear that almost no one will ever be convicted under such a clause. An irregular practitioner has only to tell the public that he belongs to no benighted medical corporation, but is practising upon some eclectic system of his own, to escape all penalty for his action. This position ought to be altered and as public appreciation of science grows it will undoubtedly be altered; but before Parliament will sanction reform it will have to be clear to the country that restraint upon quackery is called for on public grounds. Medical men naturally, but unfortunately, have been in the habit of regarding everything in the nature of medical treatment by unqualified persons as so productive of evil that they have a little blinded themselves to the fact that their fellow-men are free agents, free to ask whom they like to treat their bodies or their souls. A man need not belong to the Established Church because he happens to be an Englishman, nor need he employ a registered medical man. This must not be forgotten nor must the effect of coercion be disregarded. Any attempt to make it illegal to employ unqualified men might lead to a still larger employment of them, for the public would consider the restraint imposed upon it intolerable. Members of the public have a right to consult whom they like when they are sick, even no one at all if it is they themselves who are sick and not their infant children. Yet there are good grounds for Parliament interfering with the present unbridled liberty of unqualified practitioners and it is certain that the wiser sort of the community would welcome an attempt to do so. The misery that is wrought by quacks, the lives that are sacrificed by their lust for gain, the false hopes that are inspired by their advertisements, the hard-earned money that is wasted upon their rubbish,—all these make it necessary in the public interest that a check should be put upon the nefarious practices of charlatans. In the Medical Acts Amendment Bill, prepared by the British Medical Association, there is a clause to meet the situation, which runs as follows:—

> *Penalty for practice by unregistered persons.*—Any person who is not registered under this Act and who medically treats patients, or otherwise practises medicine, surgery, or midwifery, or performs any surgical operation for which he demands or receives any fee, gratuity, or remuneration, and also any person who not being registered under the Act, pretends to be, or takes or uses the name or title of physician, or surgeon, doctor of medicine, licentiate of, or bachelor of, medicine or surgery, or master in surgery, or assumes any other style, title, addition, designation, or description, either attached to the name of the person or to his place of residence or business, or otherwise exhibited, implying that he possesses the skill and knowledge necessary for the practice of medicine, surgery, or midwifery, or that he is recognised by law as a physician or surgeon or licentiate, in medicine or surgery or midwifery, or a practitioner in medicine, or an apothecary shall be guilty of an offence under this Act, and shall on summary conviction under the Summary Jurisdiction Acts be liable (1) for the first offence to the penalty of not less than ten and not exceeding twenty pounds, and to imprisonment in default of payment of not longer than two calendar months; and (2) for each subsequent offence to a penalty of not than less twenty and not exceeding forty pounds, and to imprisonment in default of payment for not longer than six calendar months.

With this clause every medical man must be in accord, and members of the public who have realised the real dangers of quackery, its horrible menace to public health, its extraordinary depletion of the public purse, should take the same view. The clause wants certain modification, as it must be made quite clear that the ministrations of the neighbour, the nurse, or the masseur are not illegal, but with this

alteration it would serve the purpose of protecting the public. It would not stop quackery, for while men are greedy there will be disgraceful advertisements and the money of the public will be divided between rogues and the proprietors of unscrupulous newspapers. But this scandal would be lessened if the complete impunity of the quack were lessened. The chances of fine and imprisonment would give pause to the quack desiring to claim openly "that he possesses the skill and knowledge necessary for the practice of medicine, surgery, or midwifery," and editors could not plead convenient ignorance concerning convicted quacks when the propriety of an advertisement was called in question.

But though an amendment of the Medical Acts which should prevent quackery is called for, and although to many medical men the call seems particularly loud and clear, no legislation is likely to occur without opposition. Parliament in its dislike to the appearance of granting a monopoly to any class, will require much persuasion, and even here there is wanting the unanimity of voice among medical men, the lack of which has been noted as standing in the way of so many reforms. Legislation against quackery appears to some of the most enlightened members of the medical profession unnecessary and undesirable as savouring of an undignified protection of true science. More than half a century ago, when the question of making unqualified practice illegal was being discussed, Sir Benjamin Brodie spoke strongly against the view. He urged that the medical profession should stand or fall upon its merits and did not require any legal protection. Things have changed for the worse since Sir Benjamin Brodie's time, yet we know that even then quackery was rampant. The dignified attitude that this great surgeon took up is one that many medical men will be found to adopt to-day, and even legislation against quackery will not be pressed upon Parliament with the complete unanimity of the medical profession that might have been expected.

While the majority of medical men, at any rate of those who give heed to the public relations of medicine, are in favour of amendments to the Medical Acts on the lines that have just been discussed, it must be borne in mind that no legislation is likely to occur without considerable struggle. The reasons for the alteration of the constitution of the General Medical Council are not incontrovertible, while no alteration, it would seem, can be suggested that will not give rise to some friction among the bodies to be represented, and so prevent that unanimity of view that the public will almost require of the medical profession before it will give support to any amendment of the Medical Acts. The institution of a State doctorate, though so desirable a reform, can hardly take place without seriously damaging the various medical corporations. Anything like drastic prevention of quackery by law, though this would mean a saving in lives and money to the nation of many thousands of pounds annually, is sure to be resisted strongly when it is mooted in Parliament.

These things must be remembered and the difficulties ahead should make medical reformers additionally anxious to be unanimous in their aims.

(To be concluded.)

THE MEDICAL CURRICULUM.

Mr. John Tweedy, the President of the Royal College of Surgeons of England, speaking at the prize-giving at the Medical School of Westminster Hospital on June 28th, drew attention to the present condition of the medical curriculum and observed that there was danger sometimes in over-rating mere academic successes during the student's earlier life. After all, the medical profession required the power of doing something and successes in class examinations might only imply a power of acquiring knowledge. Knowledge and power, he need scarcely tell them, were two very different departments of life. Knowledge was not even synonymous always with wisdom. Many of them, no doubt, would remember Cowper's lines:—

> "Knowledge and wisdom, far from being one,
> Have oft-times no connexion. Knowledge dwells
> In heads replete with thoughts of other men;
> Wisdom in minds attentive to their own."

When a student came to a medical school very often to his surprise, instead of beginning, as he imagined, the practical study of his profession, he found that he had to encounter several so-called preliminary sciences—chemistry, physics, and biology—before he could begin what are known as the early medical subjects of anatomy and physiology. That arrangement had been forced upon them by the kind of patchwork legislation that had been going on in the medical curriculum during recent years. If he were to criticise the medical curriculum he believed he would have the sympathy of a good many of those present when he said that the first thing he should like to see in it was a great simplification. So far from adding bit by bit to the burden which the student nowadays had to bear, he would take off a good many of the subjects which were now put upon the over-burdened student, taking care that he had more time for the thorough training of his faculties and the training of his powers of observation, instead of merely converting himself into a grinding machine in order to pass examinations. The teaching of these preliminary subjects in medical schools connected with hospitals had stood in the way, for some time, of the best medical education and he congratulated the authorities of Westminster Hospital on being the first to complete the arrangements for removing the teaching of those preliminary subjects from a medical school and arranging for the students to study those departments of natural science at a science institution. That was good, he was sure, for the medical students and it was good for medical education. The practice of medicine was largely one of applied science, and it was but right that those who were about to enter upon the medical profession should be trained in scientific methods. Those methods could best be taught in great scientific institutions. So long as the teaching of those preliminary sciences was kept in the medical schools one could not but feel that their importance as disciplines of the mind was somewhat lessened. On the other hand, the men who learned physical science in a great science centre benefited by great traditions and they acquired the best methods of observation and of reasoning. The student's scholastic training was generally a literary training, a training in which authority counted for everything; but in sciences authority counted for nothing except so far as it was based upon accurately observed data. That was one of the great benefits which medical education would derive and medical students would gain from eliminating those preliminary sciences from the medical course of studies at a hospital. Assuming that the student had completed his preliminary science training and had also completed those earlier medical studies, such as anatomy and physiology, upon the importance of which it was unnecessary for him to dwell, he then came to the great work of his life, the study of disease in the wards of the hospital, and he insisted that it was the work done in those wards that determined a man's career. An experiment was to be tried at Westminster Hospital in regard to the lectures to be delivered there. Instead of having the whole course of lectures on systematic medicine or systematic surgery given by one man it was proposed to break up those subjects and to intrust to different members of the staff different subjects. That was an experiment for which much might be said and it was an experiment which he should watch with a good deal of interest. He hoped, however, that in that arrangement there would not be neglected what he thought was necessary in all studies—a sort of propædeutic or introductory course expounding the great principles of medicine and surgery. If that were done he thought the experiment of handing over the several departments to experts might be successful. Otherwise he feared that it would lead rather to too early specialisation. Students were prone to think that medicine was so rapidly progressive that knowledge soon became obsolete, but the knowledge which students would acquire in the wards of the hospital during their course of training would be the basis upon which they would have to build the whole of their practice in the future. Knowledge grew, but truly and carefully observed phenomena did not change. Their conceptions had to be changed, their explanations of phenomena had to be readjusted, their theories often had to be recast entirely, but the fundamental problems of knowledge remained the same. If the clinical cases which might come under their observation were observed by them without prejudice they would constitute the true foundation of their knowledge and remain as the working capital of the whole of their subsequent lives.

THE LANCET.

LONDON: SATURDAY, JULY 8, 1905.

The Romanes Lecture: "Nature and Man."

THE title selected by Dr. RAY LANKESTER for his lecture in the Sheldonian Theatre at Oxford is one which must inevitably attract the attention of members of a profession concerned in daily observation of problems presented by "Nature and Man." That the subject should be approached with some degree of vehemence will cause no surprise; Dr. RAY LANKESTER has on many former occasions demonstrated his power of expressing his views with an energy which almost challenges contradiction, since it betrays a strong partisan spirit with an air of intolerance, doubtless accidental and unintentional, for the opinions of those with whom he differs. Most medical men must be credited with convictions about the true relation of nature to man and yet may hesitate to follow the line of argument in this lecture or to express entire concurrence with its logical conclusions. In contradiction of POPE'S dictum that the proper study of mankind is man we are presented with an alternative study of nature as comprised in physics, chemistry, geology, and biology. It might be hastily considered that Dr. RAY LANKESTER, speaking on such a theme, would be giving us the shoemaker's view of the value of leather but this would be an injustice to the amount of thoughtful argument displayed in the course of the lecture. Dr. RAY LANKESTER believes that "the time has arrived when the true relation of nature to man has been so clearly ascertained that it should be more generally known than is at present the case, and that this knowledge should form far more largely than it does at this moment the object of human activity and endeavour—that it should be in fact the guide of State Government and the trusted basis of the development of human communities." He employs the word nature as a name for the "entire mechanism of the universe, the kosmos in all its parts," and he maintains that man has attained an extraordinarily complex control of the conditions in which his life is carried on. While man is a part of nature, a product of the definite and orderly evolution which is universal, he is driven by the relentless mechanism which we call nature, and "it is his destiny to understand and to control it." This view seems rather revolutionary; it almost represents man as a child who, having learnt to some extent how the wheels go round, is to be encouraged to attempt to regulate their action or even to try to produce new results by interfering with the works.

There can be no doubt that man has not been content to remain a passive spectator, that his will or volition has become a power in nature, which has profoundly modified not only his own history but that of the whole living world and the face of the planet on which he exists. That man is to be regarded as "nature's rebel" is shown by reference to recent progress, to the immensely increased facilities in the application of mechanical power, in locomotion, in agriculture, and in endless arts and industries; and, on the other hand, equal progress has attended measures which he has adopted for the relief of disease and pain. The primary lesson which must be learnt from a consideration of any scientific history is that there is no finality—no stage at which it is possible to rest content with past achievements. The march of progress is endless and relentless. Dr. RAY LANKESTER asserts that civilised man, in his rebellion against natural selection and his defiance of nature's pre-human dispositions, has produced such a special state of things that he must either go on and acquire firmer control of the conditions or perish miserably by the vengeance certain to fall on the half-hearted meddler in great affairs. He is threatened on every hand by dangers hitherto restrained; no retreat is possible; the only hope is to control the sources of these dangers. The section of Dr. RAY LANKESTER'S address dealing with disease is one replete with interest, serving to present many familiar facts in a new light, and for the benefit of medical readers we may say that the address has been issued as a pamphlet. While nature eliminates those diseased or liable to disease man continually rebels and endeavours to prolong life. From the standpoint of the biologist the congenitally diseased are destroyed, as far as race development is concerned, before they can reproduce; parasites either carry off the congenitally weak (and thus strengthen the race) or become harmless by the survival of individuals capable of tolerating attacks without injury, and so we have the establishment of immune races. It is asserted that with few exceptions every disease to which animals are liable is due to man's interference. By treating disease man staves off the "adjustment by death" and thus accumulates vast populations of unadjusted human beings, animals, and plants which from time to time are ravaged by disease. This fact affords no material for discouragement to Dr. RAY LANKESTER but forms the immediate prelude of the cheering statement that the knowledge of the causes of disease is so advanced that it is practically certain that by the application of methods of investigation and consequent controlling action "all epidemic disease could be abolished within so short a period as 50 years. It is merely a question of the employment of the means at our command." We should not have ventured to go so far ourselves but undoubtedly it would be as bad to set a limit to what might be effected by the diligent application of the results of pathological research as it is to prophesy immediate and sweeping issues from the same. But unless the work of research is definitely encouraged at our seats of learning and education these results will not produce any great revolution. And it may be freely granted that Dr. RAY LANKESTER is right in holding that research is discouraged in this country by the comparative lack of State recognition and financial support. If more men and abler men were employed in study and experiment better results would be obtained in a shorter time, and these results would be of "greater significance to mankind than the emendation of a Greek text or the determination of the exact degree of turpitude of the statesmen of a bygone age." The supersession of the classical and historical scheme of education by a scheme

of education in the knowledge of nature is Dr. RAY LANKESTER'S suggestion for our future guidance and he advances his views with characteristic vigour and wit. Scholars in history and adepts in classics will not think him fair or unprejudiced, while many—and among them many medical men—will see no possible objection to the immediate adoption of his views, so that the excitement created by the Romanes Lecture of 1905 was to be expected.

The knowledge of nature intended by the lecturer had already been defined as that comprised in physics, chemistry, geology, and biology, subjects which, with the exception of geology, now form part of the training of medical students, and Dr. RAY LANKESTER believes that every man of even a moderate amount of education should acquire a sufficient knowledge of these subjects to enable him to appreciate their value and to take an interest in their progress and application to human life. Those who have watched the study of natural laws by medical students are not in unanimous agreement with this view. Perhaps it will be argued that the poor results of the instruction of medical students in natural science are due to the novelty of the subjects and to the lack of adequate previous training. Still, what now happens in the case of medical students might well happen, at any rate for some time, among all students if a course of instruction in natural science became compulsory. There might be great danger in the possession of a mere smattering of scientific jargon by the man in the street, and it must not be forgotten that with no classical training scientific terminology is likely to cause grave difficulties to the average schoolboy. While we should gladly welcome public measures producing a greater number of scientific workers, it may be well to maintain an open mind as to the value of wholesale change. It is impossible to expect that every schoolboy is in future to be trained as a scientific investigator, though it is desirable that greater encouragement should be afforded to those with scientific aptitude. Dr. RAY LANKESTER is to be congratulated on the courage with which he has advocated his views in his lecture. It may be feared that his references to classical and historical studies are not likely to be of much service to the advancement of science, and the assertion that the University of Oxford is exercising an injurious influence upon the education of the country does not seem to us warranted. Already there is a scheme for the development of technical science by the formation of an Imperial College of Applied Science in London but this is not antagonistic to the classical and historical schemes of education associated with the older universities.

The Prevalence of Cancer.

THE question as to whether cancer is increasing amongst the population is one which is continually being raised, both by the public and by members of the medical profession. The recent discussions which took place at meetings of the Life Assurance Medical Officers' Association demonstrated that some difference of opinion on this point still exists even amongst those who have given a large amount of thought and time to the subject. An answer can unfortunately only be given by the study of statistics. Such a method is generally acknowledged to be liable to fallacies and various speakers pointed out the errors that may arise in the different courses which have been adopted in the endeavour to arrive at the truth.

The discussion was opened by Dr. W. S. LAZARUS-BARLOW and Dr. GORDON TAYLOR who had prepared a paper entitled "The Evidence yielded by the Statistics of the Middlesex Hospital on the Question of an Increase of Cancer." An ingenious plan of obtaining statistics had been adopted. If a person dies in a hospital at the age of, say, 50 years, the actual year of his birth can be deduced from the year of his death. Therefore, if the post-mortem records of a hospital over a number of years are examined and each case is marked on a previously prepared sheet under the year of his birth a population is created by working backwards from the deaths of individuals. By this means, the authors of the paper maintained, it was possible to ascertain whether the proportion of deaths from cancer during a certain period had increased or otherwise. Several fallacies in this method were pointed out, not only by Dr. LAZARUS-BARLOW and Dr. GORDON TAYLOR, but also by subsequent speakers. From the very nature of the case it is clear that the results deducible from these statistics cannot be directly applied to the entire population. The class from which a general hospital draws its patients is insufficiently representative of the entire community. The patients are to a certain extent selected and we think that it may fairly be urged that especially is this the case at the Middlesex Hospital. In this institution there is a wing entirely devoted to cases of cancer and thus there is a probability that a larger proportion of such cases would be admitted in contrast to other cases than would be found amongst a similar number of individuals amongst the general population. Nevertheless, these statistics are of great interest and at any rate they show what is the experience of this particular hospital. A similar examination was made of the records of St. George's Hospital. At both hospitals it was found that from the time at which the statistics were first calculated (about 1830) to about the year 1870 there was an increase in cancer amongst women and a stationary high level had been maintained from that time to the end of the century and at both hospitals there had been in men a steady increase of cancer from the earliest date (1830). From a further investigation it was concluded that the increase in cancer was somewhat intimately associated with the alimentary tract in both sexes. Dr. J. F. PAYNE was also of opinion that the number of cases had increased in recent times and he agreed that a great part of the increase was due to malignant disease of the digestive tract "from one end to the other," basing his opinion upon the statistics of the Registrar-General for England and Wales and for Ireland respectively. Dr. A. NEWSHOLME expressed his belief that there was no trustworthy evidence of a true increase in the rate of mortality from cancer. He did not, however, state the grounds upon which his opinions were founded. He admitted, on the other hand, that the disease causes a high mortality in all civilised countries. He pointed out that in England cancer is reputed to cause, according to the returns of the Registrar-General, a mortality of about 0·8 per 1000 of the population. He further stated that he considered that this figure is an under-statement of the real facts and that when a more complete registration of all the deaths

which are due to malignant disease is established it will be found that the deaths will be at least 1 per 1000 of the population and judging by some local returns in his possession he feared it might be as high as 1·2 per 1000. The general opinion expressed in the course of the discussion was decidedly in favour of the view that during recent times there has been an increase in the mortality from cancer. Dr. R. HINGSTON FOX, however, drew attention to the significant remarks to be found in the second report of the Imperial Cancer Research Fund. In this report no definite view is expressed on the point which we have been discussing but it is intimated that the extent to which cancer is recorded is inversely proportional to the difficulties which have to be overcome in obtaining information. Therefore the conclusion is reached that the data at present to hand are not sufficient upon which to form an opinion as to the alleged increase of malignant disease. The whole subject must be *sub judice* but satisfaction may be felt in the knowledge that the last report of the Cancer Research Fund, as will be seen by reference to another column of this issue (p. 104), shows that researches are being undertaken which may at any moment end in definite results.

Before concluding we may draw attention to another point which was raised by Dr. HINGSTON FOX in the discussion—namely, as to whether the taking of alcohol has any influence in producing cancer. Great difficulty must naturally be experienced in investigating this question, but the evidence adduced from the death claims of life insurance offices is doubtless of considerable value. Dr. NEWSHOLME referred to statistics which he had published[1] based on three years' experience of the United Kingdom Temperance and General Provident Institution, a large society which has two completely independent experiences, that of abstainers and that of non-abstainers. Without going into detail he stated that it was found that the death-rate from cancer amongst the abstainers was 0·95 per 1000, and amongst the non-abstainers it was 1·34 per 1000. In other words, if the death-rate from cancer amongst non-abstainers be taken as 100, it would be 70·9 amongst abstainers, or 29 per cent. less. Dr. HINGSTON FOX urged that further support of the relation of the use of alcohol to the increase of cancer was to be found in the frequency with which the disease attacked the digestive organs, suggesting that alcohol might have some deleterious local action on the mucous membrane of the stomach and the intestines. These remarks cannot be accepted as more than suggestive. It would be rash without further evidence to conclude that there is an etiological relationship between alcoholism and cancer.

Pathology in the Streets.

IT is the medical man's privilege or penalty—for he may regard it either way—that his profession is always with him, and that whether he will or not he must needs view his fellows with something of the critical attitude that he adopts towards his patients. He is always, so to speak, on sentry-go, and cannot, like the majority of professional men, emerge at will from the beaten path of his life-work. The solicitor may rise from his desk, shut away his documents, and leaving his office tread the streets in entire forgetfulness of the particular education that earns him his bread. The medical man cannot do this. Even if he be heedless in a general way of what goes on around him, still he remains an observer from the point of view of his own science. This is the groove that the nature of his calling has planned for him and he cannot escape it, however much he may be at leisure. It was half-way to this standpoint that CARLYLE in his "Sartor Resartus" would have led the academic mind, but only half-way, since the medical man's eyes look out upon a humanity, not merely stripped of clothes, but displaying its vital organs to his inspection. The medical man must to a larger or less degree remain the pathologist in the streets. It is, as we have said, doubtful whether this is a privilege or a penalty. But the medical man is seldom a sentimentalist in the accepted sense of the word; and the unsuspected tragedies which unfold themselves before him are well enough balanced by the compensations that smooth their path and the comedies that rub shoulders with them on either side. SHERLOCK HOLMES owed both his prototype and his creator to the ranks of the medical profession and if we recollect rightly his powers detected as many innocents as criminals. And it is just this balance that saves the medical man's peace of mind from any morbid result of his instructed vision.

That there is a grim side to the question cannot be denied, for to the medical man more than to any man superficial appearances are no disguise at all. To him the pathological truth becomes apparent, even in the briefest journey, sunning itself on the pavement or hurrying, bag in hand, to railway station or crowded mart. The medical man is on nodding terms with death at most street corners in our larger towns, and if he were called on to prophesy his knowledge might well make him a very JEREMIAH among his fellows. For who else would suspect the sword of DAMOCLES that is hanging above this red-faced merchant or see in his cheeks the signal of a fruit overripe? To the lay mind this portly person stands for all that is prosperous and confident, and his appetite is the envy of many of his dyspeptic friends—who will send wreaths to his funeral. See the bluff and kindly manner with which he hands his shilling to a thin-faced woman selling bootlaces in the gutter. It is only the medical man who would dare to prophesy white hairs for her long after her benefactor has been gathered to his fathers. There may be no great tragedy in this. There is more, perhaps, behind some sunburnt cheeks that make all these other jostling faces look pallid and worn by contrast. The layman glances curiously at them and covets their brown-red hue; the medical man is quick to recognise the imprint of the health resort, other things pointing to an ominous diagnosis. There are other instances where disease is rather suggested than revealed by the appearance of its owners, cases where the medical man cannot help suspecting the presence of a cirrhotic liver, granular kidneys, and the like. These are the cases that do not obtrude themselves upon the average man in the street and form the group that, according to his humanity, makes the medical man pay the highest price for his wisdom. But in the more obvious pathological lesions

[1] Brit. Med. Jour., December, 1903.

he begins to discover its solace. For here he becomes able to judge, as no other man can, of their relative significance. He does not share the pity that runs through the crowd as some chalk-faced patient, with his arm in a sling, walks slowly and painfully along the pavement, for his prophetic instinct shows him this same man, two or three months hence, wielding a spade or hunting four days a week, leading, in fact, a perfectly healthy physical existence in accordance with the sphere in which he lives. On the other hand, the woman with the curious red spot upon her face, half hidden by hair and a veil, affords him a far more sombre chapter for reflection. For whether it be lupus, or epithelioma, or a rodent ulcer, and whether it be treated or not, it will have meant, when these same months have passed, a far greater obsession of bodily and mental pain than that of any broken limb. Such cases as these are fairly balanced and the medical man has no greater distress in his perambulations of the streets than the average observant layman, only he pities those whom the layman does not observe, and sees no great hardship in the plights that must appeal to the uninitiated.

In the last of the pathological groups to which we shall refer the medical man's knowledge is really useful. For we must all know the picture of the chronic invalid and cripple who year by year drags his deformed limbs before the pitying eyes (and purses) of his fellow-citizens and it is not difficult to imagine the feelings that are harrowed by so sorry a sight. As often as not, too, these victims wear an expression of the profoundest suffering which may impose upon many but cannot often deceive the trained eye. To the medical man it is perfectly evident that these ankylosed joints can have caused no pain for years. He recognises some old tuberculous trouble, arrested long ago, and never likely to recur unless the misguided patient shall submit to a so-called cure at the hands of a bone-setter, who will break down the adhesions and light up the old trouble afresh at the expense of an apparently straightened limb. The medical man, again, can tell very quickly that these congenitally dislocated hips are no warrant at all for the anguished look of their possessor whose abilities for the enjoyment of life are probably as great as those of most of his commiserators. Such cases as these, and they are too common upon our streets, cause the medical man to smile rather than to sigh and here his education will spare him many of the pangs that assault the softer-hearted of his comrades. And so the streets stretch out before him an infinite field for research and wonder and filled with all manner of substance for meditation. And with it all it is well to remember the exuberant sea of vitality that must abundantly overwhelm the pathological, even in the streets of London. And, doing so, the medical man of to-day will hesitate perhaps to subscribe to the opinion of old Sir THOMAS BROWNE in his "Religio Medici," that the world is "not an inn, but an hospital; and a place not to live, but to die in."

KING'S COLLEGE HOSPITAL.—The executors and trustees of the late Miss Marianne Frances Hasker have promised a donation of £20,000 towards the fund for the removal of King's College Hospital to South London.

Annotations.

"Ne quid nimis."

THE BIRTHDAY HONOURS.

Professor T. McCall Anderson, Mr. T. F. Chavasse, Dr. P. S. Jones, Dr. W. J. Smyly, and Dr. E. S. Stevenson have each had conferred upon them the honour of knighthood. Professor Thomas McCall Anderson, who is Regius professor of medicine at the University of Glasgow and the representative of his *alma mater* on the General Medical Council, graduated M.D. of Glasgow with honours in 1858 and obtained the Fellowship of the Faculty of Physicians and Surgeons of Glasgow in the same year. As the dean of the Medical Faculty of the University of Glasgow and as examiner in medicine and pathology to the Army Medical Service and the Indian Medical Service he has done good work in the interest of his profession and is the author of several books on cutaneous diseases and tuberculosis. Mr. Thomas Frederick Chavasse, the senior surgeon of the Birmingham General Hospital, is a justice of the peace for the county of Warwick. He graduated M.D. of Edinburgh in 1878 and obtained the Fellowship of the Royal College of Surgeons of that city in the same year and was made a Fellow of the Royal College of Surgeons of England, *honoris causâ*, in 1899. He is the author of various surgical monographs and has been a frequent contributor to the medical press. Dr. William Josiah Smyly, President of the Royal College of Physicians of Ireland, graduated M.D. of Trinity College, Dublin, in 1875, and became a Fellow of the College of which he is now President in 1884, having obtained the Fellowship of the Royal College of Surgeons in Ireland in 1877. He is a contributor to Allbutt and Playfair's System of Gynæcology and Quain's Dictionary of Medicine. Dr. Philip Sydney Jones, M.D. Lond., F.R.C.S. Eng., is honorary consulting physician to Prince Alfred Hospital and to Sydney Hospital, Australia, and Dr. Edmond Sinclair Stevenson, M.D. Brux., F.R.C.S. Edin., is a member of the medical council of the Colony of the Cape of Good Hope. The military branch of the medical profession is represented by Surgeon-General Charles McDonagh Cuffe, C.B., who has been promoted to Knight Commander of the Bath; Surgeon-Major Thomas Egerton Hale, V.C., a survivor of the Crimean War, and Surgeon-General William Launcelot Gubbins, M.V.O., Principal Medical Officer of the Western Command in India, who have been made Companions of the Bath; and Colonel David Bruce, F.R.S., R.A.M.C., and Lieutenant-Colonel and Hon. Colonel William Coates, R.A.M.C. Volunteers, who also received similar honours in the civil division. To each of these gentlemen we offer in the name of the medical profession hearty congratulations.

PROPOSED CHARTER FOR THE BRITISH MEDICAL ASSOCIATION.

THE annual representative meeting in Oxford last year instructed the council of the British Medical Association to take the steps necessary to obtain the alterations in the memorandum of association contained in the Birmingham resolutions, subject to such modifications as might be required to harmonise them with the present articles. One of the Birmingham resolutions would have given power to the Association to expend money for the defence, promotion, or maintenance of the honour or interests of the medical profession, including in particular taking or defending legal proceedings. The matter was

referred by the council to a committee, which has held numerous sittings and has taken legal opinions upon the course which should be followed. As a result the committee, at a meeting on June 2nd, requested the chairman of council to ascertain what prospect there would be of the Privy Council advising the Crown to grant a charter to the Association. Mr. Andrew Clark was able to report to a meeting of the committee on June 19th that as the result of inquiries at the Privy Council Office he had gathered the impression that the Association had a good prospect of obtaining a Royal Charter. The committee presented a report embodying the above facts to the council at its meeting on July 5th and the council then determined to report to the representative meeting that the information obtained as a result of inquiries as to the probability of the Association being granted a Royal Charter was so encouraging that it recommends the meeting to make an application to the Privy Council praying His Majesty to grant a Royal Charter.

VITAL STATISTICS OF THE JEWS.

THE desire has from time to time been expressed for trustworthy vital statistics of the Jews, partly perhaps on account of the absence in this country of any satisfactory basis for their calculation. No religious census has ever been taken in the United Kingdom; neither does the birth- or death-rate afford any information as to the religious persuasion of deceased persons or of the parents of children born. These facts, however, do not detract from, but rather add to, the interest of a paper read before the Royal Statistical Society on June 27th, entitled "A Contribution to the Study of the Vital and other Statistics of the Jews in the United Kingdom," by Mr. S. Rosenbaum. While it is difficult to accept as entirely satisfactory all the conclusions arrived at by the writer of the paper, based upon a number of somewhat hypothetical assumptions and estimates, he has brought to his task a sound knowledge of statistical method and of the fallacies that beset so much statistical work. The paper, therefore, deserves the careful attention of those who are interested in the subject. The total Jewish population of the United Kingdom is estimated at about 240,000, as the mean of two methods of estimation, based upon the recorded numbers of marriages solemnised in accordance with the usages of the Jews. Bearing in mind that a considerable, but unknown, proportion of Jews are admittedly married according to the rites of the Established Church, or are married in Nonconformist registered buildings or by a superintendent registrar without religious service, this estimation of the Jewish population in the United Kingdom is probably below the true number. Such under-estimate, however, would not affect some of the other conclusions arrived at by Mr. Rosenbaum. It appears from statistics relating to burials in Jewish cemeteries that an abnormally large proportion of young children are therein buried, from which was falsely assumed, by at least one witness at the recent Royal Commission on Alien Immigration, an abnormally high rate of infant mortality among the Jews. In the paper under notice the fallacy of such an assumption is clearly proved, as correct rates of infant or child mortality cannot be deduced from the recorded age at death without knowledge of the number of infants and young children born or living, which information is not available concerning Jews. Mr. Rosenbaum appears to establish the correctness of his assertion, with special reference to the aggregation of foreign Jews in the metropolitan borough of Stepney, that the birth-rate among this Jewish population is considerably higher than among the resident English population and that infant mortality is considerably lower, thus corroborating the general impression that Jewish women are remarkably good mothers. It appears that in the three quinquennial periods ending respectively in 1890, 1895, and 1900, while the metropolitan rate of infant mortality (deaths under one year to 1000 births) successively increased from 153 to 156 and 161, the rate in the borough of Stepney declined from 170 to 168 and 165. These figures do not show a low rate of infant mortality in Stepney, but they prove that the steady and remarkable recent aggregation of Jewish aliens in that borough has been accompanied by a decline of infant mortality concurrently with a general increase in the mortality of infants in the whole of the metropolitan area. The paper shows sound reason for believing that the Jewish birth-rate, at any rate in East London, is considerably higher than the non-Jewish birth-rate and that it was equal to 45 per 1000 in 1903. It is further asserted that this high birth-rate is not only due to the large proportion of Jewish women who are married but also to the greater fertility of Jewish wives. Whether Mr. Rosenbaum was well advised to use his hypothetical figures for the construction of a life table is open to some doubt, but the resulting table shows a higher expectation of life at all ages and for both sexes than is shown by life tables based upon the mortality of the general population of England and Wales. This is attributed not only to the more careful treatment of infants and children by Jewish mothers but also to the generally temperate habits of the Jewish population. The combined result of the high birth-rate and the low death-rate among the Jews is an abnormally high rate of natural increase, by excess of births over deaths. Mr. Rosenbaum admits that his conclusions have been mainly based upon the Jewish population of East London, which has an extremely abnormal age constitution, due to the alien immigration, including very few children or elderly persons, and it seems open to doubt whether the effect of this exceptional age constitution has been fully allowed for in estimating the marriage-, birth-, and death-rates of the population. The paper is, however, full of interest and many of the conclusions appear to be, in the main, well founded.

A CASE OF ABSCESS OF THE SPLEEN AFTER TYPHOID FEVER.

ABSCESS of the spleen after typhoid fever is a very rare complication and very few cases are on record. A case of exceptional interest is recorded by Dr. Federmann of Berlin in the *Deutsche Medicinische Wochenschrift*, No. 15, 1905, in which this condition occurred and was cured by operation. The patient was a labourer, 23 years of age, who was admitted into the Moabit Hospital for an attack of typhoid fever of moderate severity. On the eleventh day after the decline of the fever the patient developed a further febrile attack with leucocytosis. An exploratory puncture showed the presence of turbid purulent fluid in the left pleural cavity. About six centimetres of the ninth rib were removed subperiosteally and 300 cubic centimetres of this purulent fluid were evacuated; the lower lobe of the lung was adherent to the diaphragm which bulged upwards to a considerable degree. Subphrenic suppuration was in consequence suspected and on puncture thick brownish pus escaped. On incision below the diaphragm 500 cubic centimetres of stinking pus, containing masses of necrotic spleen tissue, were discharged, leaving a space, as large as two fists, with very thin walls, beyond which the stomach, the liver, and coils of gut could be distinctly felt. The abscess occupied practically the whole of the upper half of the spleen. The cavity was carefully cleaned out and packed with iodoform gauze. Convalescence was somewhat protracted but three and a half months later the patient left the hospital, his wounds being completely healed. Since that time he has remained healthy and is able to work. Dr. Federmann,

in discussing the diagnosis of the condition, considers that the important features of the case were the evidence of fluid in the pleura and the leucocytosis. As is well known, uncomplicated typhoid fever produces a state of leucopenia or a reduction in the number of leucocytes. In this case a leucocytosis of 14,000 per cubic millimetre occurred in the second week of the illness, subsequently increasing to 25,000. The surgical treatment of the condition offers a very fair chance of recovery, since in the 27 cases recorded in the literature there is only a mortality of 15 per cent.

TEA AND THE EFFECTS OF TEA-DRINKING.

WHILE everyone knows that it is wrong to stew tea, to draw from it as much of its astringent principles as possible, yet there are few who pay any practical regard to the warning not to prepare tea in this way. It cannot be too widely known that not only is theine the most essential constituent of tea but also that it is almost as quickly soluble in hot water as is sugar. The making of the infusion is therefore complete in a few minutes and only tea so prepared is the "blessed beverage." The abuse of tea, like the abuse of anything else, is, of course, reprehensible and the guilty person deserves all the unpleasant symptoms which excessive tea-drinking or the drinking of strong, stewed tea sooner or later brings in its train. The subject is a well-worn one but in view of the enormously increasing consumption of tea in this country it is desirable to return to it and to remind our readers to impress upon their patients the undoubted evils to which immoderate and careless tea-drinking gives rise. In 1893 THE LANCET Analytical Commission published a report on "Tannin and Theine in China and Indian Teas" which was based on a number of laboratory experiments and the results were distinctly instructive, leaving no doubt as to the way in which tea should be consumed if the vicious principles are to be eliminated and the virtuous principles retained. More recently Dr. W. Scott Tebb, public analyst to the metropolitan borough of Southwark, has conducted an investigation at the instance of the Southwark borough council on similar lines and his report printed in pamphlet form contains some interesting observations on the subject of Tea and the Effects of Tea-Drinking. He concludes, and we are inclined to agree with him, that in the first place we drink too much tea as shown by a simple calculation from the average annual amount imported for consumption. Then as regards the best method of preparing tea, he recommends that the tea should be infused (not stewed or decocted) for no longer a period than five minutes. As to the variety of tea, he says that although it is not certain that the average China teas contain less tannin than do the Indian teas there is no doubt that individual samples of China tea can be procured comparatively free from this astringent principle. Tea, he suggests, should be examined for the amount of alkaloid and tannin and the price should be based on the proportion of the essential ingredient, the alkaloid; and the public should in each case, he thinks, be informed of the quantity of tea required to be used with boiling water—according, in fact, to the alkaloidal contents—and at the same time an indication should be given of the proportion of tannin liable to be extracted in a standard infusion. Such a procedure, surely, would be utterly impracticable and we doubt if it is scientifically sound. To begin with, the quality of tea bears no sort of relation to its alkaloidal contents any more than does the quality of tobacco depend upon its proportion of nicotine. The best cigar or tobacco does not necessarily contain the smallest amount of nicotine. Again, the proportion of tannin extracted depends upon the kind of water used. As was shown in the report of THE LANCET Commission referred to, soft or distilled water (which latter, by the way, Dr. Tebb employed in his experiments) dissolves the tannin more rapidly than does tap water but effects no increase in the amount of theine dissolved. Hard water will, indeed, render part of the tannin insoluble. Much depends, too, on the size of the leaf and there is no doubt that the most economical way of preparing tea is to powder it, in which case the time during which it is allowed to infuse can be considerably shortened, although the alkaloid and flavouring substances will be almost completely extracted. Another point to which we may draw attention is that caffeine and tannin are chemically antagonistic; they may also be to an extent physiologically antagonistic also. A hot infusion of Indian tea when allowed to cool yields a considerable deposit containing both tannin and theine. Tannin, in truth, is a precipitant of many alkaloids and a strong solution either of tannin or of tea is directed to be administered in certain cases of poisoning by alkaloids. It is probable that the physiological action of an infusion of tea is not identical in every respect with that of pure theine. The tannins comprise an exceedingly numerous class of substances the members of which do not behave physiologically or chemically in the same way. Tannin is present, for example, in tea, in coffee, and even in cocoa, but the astringent properties of the three beverages are very different, though the actual amount of tannin consumed may be the same. The use of plenty of milk with tea, it may be added, is a wise precaution and must be regarded as a sound physiological proceeding, since the proteids of milk destroy astringency and probably prevent the otherwise injurious action of tannin on the mucous membrane of the stomach. In the intestinal juice the proteids are separated and the tannin probably combines with the sodium salts. The immoderate drinking of tea is an unquestionable evil but, on the whole, we are inclined to think that the evils of tea-drinking have been exaggerated. The real difficulty is to convince people that a lightly drawn infusion gives them their money's worth.

THE BLOOD PRESSURE IN CONVALESCENTS: "THE HYPOTENSION OF EFFORT."

AT the meeting of the Société Médicale des Hôpitaux of Paris on May 5th M. C. Oddo described an interesting phenomenon which he had observed in studying the blood pressure of convalescents—a fall of pressure after slight effort, such as going rapidly round the ward or ascending and descending two flights of stairs. This he terms the "hypotension of effort." Usually there was produced first a brief and feeble rise of pressure; after a minute the fall began and lasted for two or three minutes; after five minutes the pressure became again normal or remained for some time below the normal and regained the normal slowly. In other cases there was no rise of pressure and the fall immediately followed the effort. The fall of pressure usually amounted to from one to two centimetres of mercury on the sphygmomanometer of Potain, but sometimes it amounted to as much as four centimetres. Usually the blood pressure was subnormal before the experiment, varying from 11 to 14 centimetres of mercury, but sometimes the pressure was normal; in several cases a pressure of 16 or 17 centimetres fell after the effort to 13 or 14. This fact is of particular interest because it shows that in convalescents the blood pressure is not only feeble but unstable, and that it may be unstable without being feeble. The frequency of the pulse generally follows the blood pressure—that is to say, the pulse is momentarily accelerated after the effort, then rapidly falls, and finally becomes normal at the same time as the blood pressure. This is in contradiction to Marey's law but exceptions to it in disease are well known. However, in some cases the pulse rate increases while the tension falls.

The hypotension of effort is not constant in convalescence; it is most frequent in the early stages when the blood pressure is low but even then it may be absent. In the normal state the effect of effort is to increase the blood pressure. But when exertion is carried to the point of fatigue the pressure falls. It is easy to understand why a slight effort has the same effect on the blood pressure in convalescence as prolonged exercise or violent effort in health. Exertion during convalescence submits the heart to a task which is too great; it is unable to discharge into the arteries sufficient blood to maintain and to elevate the pressure. If cardiac fatigue immediately follows the effort hypotension results. But if the heart preserves enough of energy to discharge into the arteries the excess of blood brought to it by the veins the blood pressure is momentarily raised. Then the increased work is followed by exhaustion and the blood pressure falls. The vessels also play a part: their muscular fibres are exposed during the effort to an increased strain; they become exhausted and relax, contributing to the fall of pressure. Usually these two factors, cardiac and vascular, combine in producing the hypotension. But sometimes the predominance of one or the other is observed clinically. The cardiac factor is shown by tachycardia, arhythmia, and feebleness of the sounds; the vascular by vaso-dilatation of the lower part of the body in the standing posture, redness or pallor of the face, and dermographia. The last M. Oddo has often observed in convalescents. It follows that to appreciate the cardio-vascular condition of convalescents it is not sufficient to measure the blood pressure during rest but also to ascertain its stability after exercise.

THE CHOICE OF AN OCCUPATION FOR THOSE WHO SUFFER FROM AFFECTIONS OF THE EYES.

SYSTEMATIC examination of the eyes of school children seldom fails to show that a considerable proportion of them have defective sight and will therefore be placed at a disadvantage if in after life they engage in employments for which normal vision is desirable. Some useful suggestions on the practical side of this question will be found in Dr. Wilhelm Feilchenfeld's "Gesundheitspflege des Auges." He says, for instance, that sufferers from sensitive eyes, with easily irritated conjunctiva, or with chronic or frequently occurring inflammation of the lids, ought not to engage in work which is either associated with the production of much dust—such as baking or milling—or which involves exposure to a dazzling light, such as the occupation of a furnaceman. Individuals in whom symptoms of ocular fatigue easily come on ought not to choose an occupation which requires straining of the eyes by long-continued near work, such as sewing, knitting, copying, or shorthand writing. Individuals with one eye only should be warned against all kinds of employment which frequently lead to injuries of the eyes, such as metal-working or stone-masonry, because to such persons any injury to the eye is exceptionally serious. Also, one-eyed individuals should not choose any occupation which demands a very exact estimation of distance, because for this vision with both eyes is almost absolutely necessary, although a person can learn, up to a certain degree, to estimate distances with one eye alone. Individuals with progressive shortsightedness must avoid all occupations which entail great exertion upon the eyes; they should not engage in study, or become clerks, or mechanics, tailors, dressmakers, fancy needleworkers, or quilters; on the contrary, agriculture, gardening, milling, or brewing should be recommended to them, or they could become shop assistants, or, if women, cooks. Individuals who are colour-blind should not become seamen, and, if employed on a railway, it should not be in the outdoor department. Individuals who require to wear spectacles always, on account of some error of refraction, ought not to be employed near a furnace or in rooms containing steam, because in such places the spectacles continually become steamy and so cause indistinct vision; such individuals, therefore, are not suitable, e.g., for locksmiths, engine-drivers, firemen, or, if women, for laundresses.

FOURTH-OF-JULY TETANUS.

EXUBERANT patriotism is not without attendant dangers. In any case the health authorities of Chicago have issued a timely and official warning. The bulletin of the health department, published a fortnight before the event, discusses the proper treatment of Fourth-of-July wounds. The American Medical Association and its journal have often dealt with the question of the "prophylaxis of the Fourth-of-July tetanus." The celebration of American independence, when loyal citizens endeavour "to blow the country off the map," produces what is described as thousands of "useless injuries." These are caused very generally by premature explosions of blank cartridges and are frequently followed by tetanus. It is therefore urged that large quantities of tetanus antitoxin should be held ready at the disposal of the public on every July 4th. According to the available information no case of lockjaw has occurred when this preventive has been used. It is also considered perfectly harmless. Consequently it was employed in a large number of hospitals last year and efforts have been made to insure its wider use on the present occasion. The only deaths from tetanus were among those who had not used the antitoxin before the symptoms of the disease had appeared. It is odd that national rejoicings should lead to numerous and fatal injuries. Nothing could be more brilliant than the fêtes of July 14th in France and they do not occasion such accidents. But the French people generally trust "the Administration" to manage matters for them and leave pyrotechnic displays in the hands of specialists fully qualified to handle these explosives. If in America the money which each individual spends in squibs and petards was paid into a central fund a display of fireworks really worth seeing could be organised, and this without endangering the lives of the citizens.

THE ANATOMICAL AND FUNCTIONAL INDEPENDENCE OF THE LOBES OF THE LIVER.

M. H. Sérégé has contributed an interesting paper to the Académie des Sciences of Paris[1] wherein he argues that the lobes of the liver are anatomically and functionally independent, advancing anatomical, physiological, pathological, and clinical reasons in support of his views. The anatomical independence of the lobes was affirmed by Glenard in 1895 and confirmed by Wertheimer and Lepage in 1896. The writer considers the proposition is proved by the injection of a solution of methylene blue into one of the branches of the portal vein when it is observed that only one lobe is coloured by the dye. The physiological independence of the lobes is demonstrated by the existence of a double current of blood in the portal vein. If a drop of Chinese ink be injected into a small vein of the small intestine the coloured particles are found in the right lobe, but if the ink be injected into the splenic vein the particles reappear in the left lobe. Another physiological proof consists in the determination of the amount of urea present in the different lobes. It has been observed that the left lobe contains the most urea until the third hour of digestion, after which the right lobe contains the most until the next meal is taken. During abstinence from food both lobes contain an equal quantity of urea. Again, the determination of the quantity of glycogen

[1] Comptes Rendus, No. 12, p. 804.

present in each lobe during digestion shows that the left lobe is richest in glycogen until the third or fourth hour of digestion and the right lobe contains the most from the fourth to the tenth hour. But if the fasting be prolonged it is surprising to note that from the twelfth hour onwards and until the next meal the left lobe again contains the most glycogen. In conjunction with Dr. E. Soule, M. Sérégé determined the rate of flow of blood in the right and left lobes. The flow was more rapid in the right lobe than in the left, a result which is in agreement with the work of M. Jolyet and M. Rosapelli, and offers a rational explanation of the difference in the quantity of glycogen present in each lobe. M. Sérégé further considers that the records of pathological anatomy and clinical experience in medical literature furnish ample evidence of the independence of the lobes of the liver.

A DEAN'S OPINION AS TO CLEANLINESS.

THE Dean of Canterbury appears to hold views which, we hope, are peculiar to himself upon the virtue proverbially described as holding a position next to godliness. He is reported as having delivered himself recently of sundry observations upon the subject of luxury among modern schoolboys at the celebration of the jubilee of the Clergy Orphan Corporation at St. Edmund's School, Canterbury, and to have held up to his audience as an example of the sybaritic tendencies of the age the fact that the governors of a great public school "had actually found it necessary to provide the poor little boys with shower baths when they came in from football." He appears to have added, by way of explaining his point of view, that when he himself was a schoolboy "there was scarcely anything necessary for the purpose of his education except a room, a book, a man, and sometimes a stick." Making every allowance for the humorous side of this description it would seem that the Dean of Canterbury considers that the modern mechanical aids to cleanliness are not desirable so far as boys are concerned because when he himself was a boy he was not provided with them. The word "necessary" is a somewhat misleading one. Cleanliness is an adjunct and aid to healthy life but no sanitary precaution is "necessary" unless we start by regarding it as "necessary" to provide for the young the healthiest surroundings that are reasonably attainable and to train them to the use of sanitary appliances for their own benefit. Schoolboys are never likely to carry washing to excess, but they come from a game of football on a moist November day begrimed with mud, their clothes damp with perspiration, and sufficiently fatigued to be grateful for the refreshment of a bath. Clean and dressed again in dry clothing they are more likely to benefit by the healthy exercise which they have taken than if they remained dirty and in their wet clothes and we ask the Dean of Canterbury whether he would seriously deny this. Perhaps he would answer that they should be allowed to change their clothes if these are wet and muddy, although no doubt in the days when he was young change of clothes for games was less universal than now. Would he, however, suggest that a boy should change his clothes when they are dirty but should not cleanse his skin when it is in a similar condition? And if the boy is to wash is there any reason why he should not be furnished with a form of bath which will insure his doing it efficiently and rapidly without giving him the opportunity for soaking himself in warm water, a performance which might fitly be described as a luxury and as one likely to lead to undesirable results? If the Dean of Canterbury does not agree with us let him visit a room full of boys fresh from football in the act of changing their clothes and of performing such ablutions as may be within their reach and he may not only modify his views as to the "necessity" of shower baths and as to their position as luxuries, but may also feel that as a schoolmaster he would prefer to be shut up on a winter's afternoon with a class of lads fresh from their luxurious baths to instructing the same youths in the hardier circumstances which he recalls as characteristics of his own boyhood. It is not a little disappointing to those who have at heart the education of all classes of the nation to the appreciation of healthy conditions of life to find an eminent member of the ecclesiastical profession belittling cleanliness as a superfluity and a luxury. The clergy occupy an admirable position for the teaching of many things besides the doctrines and precepts of religion and they are not as a rule averse from interfering in purely medical matters or from lecturing upon subjects which have no direct connexion with their vocation. It would neither compromise their dignity nor diminish their usefulness if they were to put themselves in the forefront of the sanitary progress of the present day, but it cannot be said that they have hitherto done so to any marked extent. Schools in which they have held considerable, if not paramount, authority have not always been conspicuous for the high quality of their sanitation. Ventilation in churches is by no means carried to the point of making them wholesome places for large numbers of persons to remain in for an hour or two at a time. The Dean of Canterbury, however, seems to have gone further than mere indifference to undesirable conditions which others view with disapproval and to have suggested that cleanliness must be obtained with difficulty or must be deemed a luxury and to have been influenced in doing so by the fact that it was not regarded as worthy of consideration when he himself was young. Those who remember public schools in those days, however, and who are acquainted with the schoolboy of the present century sufficiently to know what his life really is and to compare it with their own, will probably think that if his existence is more luxurious than it would have been in the last generation it is cleaner, happier, and better not only physically but morally. It is the effort, at all events, of those who supervise it to make it so and they will probably not relax their efforts because the improvement which they seek to introduce was not 50 years ago regarded as "necessary."

SECONDARY FACTORS IN THE MORTALITY AND TRANSMISSIBILITY OF PULMONARY TUBERCULOSIS.

AT the first medical congress of the Republic of Cuba, which was held in Havana on May 23rd, Dr. Carlos J. Finlay, chief sanitary officer of the Republic, read a preliminary note on the Importance of certain Secondary Factors in the Mortality and Transmissibility of Pulmonary Tuberculosis. THE LANCET of May 27th contained a report of a paper on the Significance of Phthisis Death-rates, read by Dr. Arthur Ransome before the Epidemiological Society in London on May 19th, and when that issue of THE LANCET arrived in Havana on June 9th Dr. Finlay was kind enough to send us an abstract of his paper. He holds it to be an aphorism that the tubercle bacillus *in pure culture* is practically incapable of developing in the pulmonary tissues either the anatomical or the clinical symptoms characteristic of confirmed pulmonary tuberculosis, and he considers that precautions against the infection of healthy persons by bacilli from the sick are not nearly so important as the elimination, both for the sick and the healthy, of everything that may tend to paralyse in the human organism the natural resources with which it is endowed for its defence against the invasion and development of the tuberculosis infection. He says that the two resources which the human system possesses against the aggressions of Koch's bacillus are, first, the phagocytic properties to

the leucocytes and, secondly, the stimulus towards proliferation experienced by the connective tissue cells under the action of the secretions of the bacillus. Under the influence of this stimulus the connective tissue cells build up around the bacilli a capsule which on the one hand protects the bacilli against the avidity of the phagocytes and on the other impedes the multiplication of the bacilli as well as the transudation of their secretions towards the adjacent tissues. The protection obtained by the patient through the encapsulation of the bacillary focus is liable, however, to be precarious, inasmuch as if in its neighbourhood a focus of pyogenic bacteria should be installed these through their necrotic and ulcerative tendencies may destroy the walls of the protective capsule. Such bacilli as may have survived will thus be set free; they will multiply and with the protection that their association with the pyogenic bacteria will afford them against the phagocytes, they will accomplish the work of destruction in the adjacent tissues and will bring about the formation of new foci either within the body of the same patient or externally wherever particles of the mixed culture (tuberculo-pyogenic) may have been conveyed from their original site. Among these pyogenic bacteria Dr. Finlay includes not only the staphylococcus and streptococcus but also Friedländer's and Frankel's cocci, the bacillus of influenza, and the micrococcus tetragenus of Gaffky, and he naturally arrives at the conclusion that the best prophylactic of tuberculosis and the best remedial treatment are the respiration of pure air.

STANDARDS AND THE SEASONAL VARIATION IN THE COMPOSITION OF MILK.

THE adoption of analytical standards in regard to milk whilst affording a certain degree of protection to the community against adulteration is not calculated to secure the supply of milk of maximum quality. It is evident that the temptation to water a rich milk or to reduce the fat to such an extent that it still complies with the requirements of the standard is, in many instances, irresistible. In the recently published report, for example, of the public analyst of the borough of Portsmouth, Mr. Edward Russell, B.Sc., F.I.C., for the year ending Dec. 31st, 1904, the figures indicate a studied and systematic sophistication of the milk-supply of that borough. The figures, that is to say, run perilously near the legal limit, or, in some instances, are just that trifle below which makes it difficult to differentiate between a poor genuine sample (in the light of the legal minimum) and a tampered milk. When the analyst calculates that the milk is adulterated with 5 per cent. of water or is deficient in fat to the extent of 5 per cent., based on the legal standard, the extreme probability is that the milk has been tampered with to a larger extent than these figures would indicate. As suggested by Mr. Russell, it would be well if the calculation of the extent of the adulteration in those cases in which the fat falls below the minimum legal limit could be based on such a standard as the mean between the two lowest points of the curve given in a table showing the seasonal variations of genuine milk. The curve of undoubtedly genuine samples is practically parallel in this table with the curve illustrating the variation in the general supply. As an example a milk showing 2·85 per cent. of fat on analysis is quoted. This would be reported as being deficient in fat to the extent of 5 per cent. below the legal minimum, whereas if the standard figure 3·4 (the lowest point of the general curve) were used as the basis of calculation the deficiency would be represented as 16 per cent., which is probably much nearer the truth. As is well known, distinct variations occur in the quality of milk at periods in the year corresponding with the seasons. Thus in winter milk is of good quality, while in summer the milk is poorest, and in the spring and autumn the quality is neither rich nor poor. The plan suggested seems to us to be worthy of attention and its adoption would undoubtedly result in a considerable improvement in the quality of the milk-supply.

PATHOLOGICAL MATERIAL SENT BY POST.

THE attention of the Postmaster-General has been drawn to the fact that pathological specimens are frequently sent by post by members of the medical profession and other persons in packets which have not been registered as required by the Post Office regulations. The Postmaster-General desires to give notice that the transmission of such specimens is sanctioned only on the condition that they are handed in at a post office for transmission by registered letter post, and that they are packed in accordance with the regulations published in the Post Office Guide. These regulations, which are necessary for the protection of Post Office servants and of the public, provide that any deleterious liquid or substance sent by post must be inclosed in a receptacle hermetically sealed, which receptacle must itself be placed in a strong wooden, leathern, or metal case in such a way that it cannot shift about, and with a sufficient quantity of some absorbent material (such as sawdust or cotton-wool) so packed about the receptacle as absolutely to prevent any possible leakage from the packet in the event of damage to the receptacle. The packet must also be marked "Fragile, with care." Any person who sends by post a deleterious liquid or substance for medical examination or analysis otherwise than as provided by these regulations is liable to prosecution, even if he be a patient sending something to his medical adviser for his opinion or a medical practitioner sending something to a laboratory or elsewhere.

THE DANYSZ VIRUS FOR FIELD PESTS.

AN example of the national character of the work undertaken by the Pasteur Institute in Paris is afforded by the annual report of the British Consul at Bordeaux, just published. In the department of Charentes, which lies to the north of Gironde, the crops have suffered terribly from the inroads made by a small animal described as something between a field mouse and a field rat. These rodents, as a rule, occupy the lower marshy ground, chiefly meadows and pasturage; but the floods following the heavy rains of 1902-03 drove them from their natural habitat on to the higher arable land, where they wrought serious havoc. In spite of various efforts at extermination they throve in their new quarters and multiplied at a terrific rate, their numbers being estimated at from 1,000,000,000 to 1,200,000,000. Nux vomica was the chief medium employed to rid the country of these marauders but it proved unsatisfactory inasmuch as small birds, game, domestic fowls, and animals were freely numbered among its victims. Then the Pasteur Institute came to the rescue with a specially prepared remedy. At first this Danysz virus did not prove very efficacious until experience taught that it must be distributed while fresh and protected, as far as possible, from the action of light. The practice adopted was to prepare the rolled oat grain used as bait in dimly lighted sheds and to spread it on the fields in the evenings. Under these conditions it is claimed, says Mr. Vice-Consul Hamilton, that "the mortality induced by it in the field mice, as the result of recent experiments, is as high as 98 per cent. within 15 days, as not only those 'campagnols' which have eaten the bait die within five days but the others are infected by the disease and die in their turn. The contagious malady induced by the Danysz virus resembles typhoid but is innocuous to all living beings except rats and mice, to

which animals it is fatal. There is a special service attached to the Pasteur Institute in Paris for the preparation of this virus, which is prepared in combination with a tempting broth and is sent down to the Charentes in bottles on receipt of requisitions from the mayors of the communes affected. The inhabitants of many communes are marshalled by the mayor in semi-military formation and the bait spread methodically in such a manner as to leave no portion of ground without its share of poisoned grain."

LECTURES ON EXPERIMENTAL PSYCHOLOGY.

WE have received a prospectus announcing the following courses of lectures in experimental psychology at King's College, London, for the ensuing academic year. In the first term Professor W. D. Halliburton will lecture on the General Structure and Histology of the Nervous System and of the Sense Organs. In the second term a course of eight weekly lectures will be given by Dr. C. S. Myers on Modern Investigations in the Psychology of Memory. Dr. Myers will also deliver during the second and third terms a course of lectures in Experimental Psychology, accompanied by demonstrations and laboratory work in the rooms of the new psychological laboratory which adjoin the physiological laboratory of the college. The second term's work will be mainly devoted to the study of sensations and their relation to experiences of space, form, weight, time, rhythm, and harmony; the third term mainly to the study of attention, fatigue, practice, work and memory, the effect of drugs, the chronometry of mental processes, and the general principles of psycho-physical research. For the benefit of students of the laboratory a departmental library has been started which contains the principal English and foreign books and periodicals devoted to general and experimental psychology. The days and hours of the lectures are not yet fixed but would-be students are requested to communicate with the Secretary of King's College.

THE MODE OF ORIGIN OF NEOPLASMS.

AT the meeting of the French Academy of Science held on May 29th there were presented two papers bearing upon the question of the development of malignant growths. In one of them, entitled "Reproduction Expérimentale du Cancer de l'Homme," M. Mayet claimed to have succeeded in infecting a dog by means of fluid obtained by the maceration of the tissue of a uterine myoma. On May 4th and May 14th, 1904, there were injected into the animal respectively 20 cubic centimetres and 40 cubic centimetres of the fluid, after this had been filtered through porcelain and the absence of perceptible organisms had been confirmed by the use of the microscope. The dog died on May 18th, 1905, and there was then found in its spleen a tumour which was described as being of the size of a nut and of sarcomatous character. This experiment M. Mayet regarded as supporting his earlier observation that tumour juice would set up in white rats processes giving rise to the production of neoplasms differing in form from that of the original tumour and situated far from the region of injection. The second paper referred to was by M. Charrin and M. Le Play and dealt with the effects produced by the subcutaneous and intraperitoneal injection of pure cultures of the fungus stearophora radicicola which grows upon the root of the vine. Under the skin and mucous membranes of the animals examined were found nodules made up of lymphocytes, polynuclear leucocytes, and a few connective tissue fibrils, together with a network of the mycelial filaments of the fungus. The growths attained in some cases the size of a pigeon's egg and contained a good deal of black pigment, giving them a melanotic character. In the liver and kidneys there were further growths, different in the two organs. Hæmorrhagic foci occurred in the spleen, the medulla of the suprarenals, and the nervous system, and there was diminution in the numbers of the red corpuscles and in the amount of hæmoglobin. Most remarkable, however, were the changes in the skeleton. The bones were found to be altered in composition, there being a diminution in the quantities of water, phosphoric acid, and lime normally present, while individual bones were deformed from the development in or upon them of curvatures and nodosities. Other parasites of the same group produced effects displaying a general similarity to those above mentioned. These researches may be correlated with those of Plimmer, whose experiments led him to the conclusion that the "cell inclusions" found in malignant growths are parasites allied to the saccharomycetes, for there is some reason to think that both saccharomyces and stearophora are degenerate members of the group of fungi known as ascomycetes.

THE BRITISH ELECTRO-THERAPEUTIC SOCIETY.

AS will be seen by a reference to our advertising columns, this society intends to hold its provincial meeting at Leicester on July 26th, 27th, and 28th, during the visit of the British Medical Association. These meetings will be free to all members of the British Medical Association and other qualified medical men. A programme of the papers to be read and discussions to be held will shortly be announced and any medical practitioner wishing to take part in the discussion or to read a paper is invited to communicate without delay with the honorary secretary, Dr. E. Reginald Morton, 22, Queen Anne-street, London, W. The British Electro-Therapeutic Society is doing good work in the application of electrical forms of energy for the cure and relief of disease and one of its most stringent rules is that its members must be qualified medical men.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE sixty-fourth annual meeting of this association will be held on July 20th and 21st at 11, Chandos-street, Cavendish-square, London, W., under the presidency of Dr. T. Outterson Wood. The educational committee will meet on July 18th at 4 P.M. and the parliamentary committee on the 19th at 5 P.M. The adjourned annual meeting will be held on the 19th. On the 20th the council will meet at 9.30 A.M. and the annual meeting will commence at 11 A.M. With regard to the election of officers, council, and standing committees, we are asked to remind members that the voting papers must either be handed in at the annual meeting or sent by post to the general secretary at 11, Chandos-street, London, W., so as to reach him at least seven days before the date of the annual meeting and must be legibly marked on the outside "Voting Paper." There are eight candidates proposed for election as members. After the various elections have been decided, several reports received, and other formal business transacted the annual meeting will reassemble at 2 P.M. when the retiring President, Dr. R. Percy Smith, will introduce his successor, who will present any prizes or medals that may have been awarded during the year. The President will then deliver his address. Immediately after the presidential address Dr. George M. Robertson, medical superintendent of the Stirling District Asylum at Larbert, will introduce for discussion the question of the Employment of Female Nurses for the Care of Insane Men and several members have promised to take part in the discussion. On the 21st, at 10 A.M. (in view of the introduction of two Lunacy Bills in Parliament), the question of the treatment of insanity and the proper accommodation to be provided, especially for early mental

disorders, will be brought forward for discussion. Dr. Helen Boyle, late an assistant medical officer in the London County Asylum, Claybury, will read a paper upon Some Points in the Early Treatment of Mental and Nervous Cases, with Special Reference to the Poor. Dr. J. Milson Rhodes, member of the Lancashire asylums' committee and member of the committee which reported upon asylums in the United States, will read a paper upon the Provision of Suitable Accommodation for the Various Forms of Insanity. Dr. Alan McDougall will read a paper upon the David Lewis Colony for Epileptics, Alderley Edge, of which he is the resident medical officer. At 2 P.M. the question of pulmonary tuberculosis in asylums will be brought up for discussion. Dr. George W. Greene, medical officer, Claybury Asylum, will read Notes upon the Incidence of Tuberculosis in Asylums. The following papers are also promised: Some Definitions, by Dr. Charles A. Mercier, and Some Remarks in Regard to Urine Testing, by Dr. Robert Jones. The annual dinner will take place on July 20th at the Whitehall Rooms, Hôtel Metropole, London, at 7.30 P.M. Tickets one guinea (wines included).

INFORMATION has just come to hand that the committee of organisation of the Fifth International Congress of Obstetrics and Gynæcology, having received numerous intimations from gynæcologists in Russia and outside that country suggesting that the Congress should be postponed for a year, has decided, after a discussion at a special meeting, to put off the Congress, which was to have been held in September, 1905, in St. Petersburg, to next year (1906).

IN connexion with the visit to England of their Imperial Highnesses Prince and Princess Arisugawa of Japan the King has appointed Dr. Ishinoské Mimura, physician to His Imperial Highness Prince Arisugawa of Japan, to be an Honorary Member of the Fifth Class of the Royal Victorian Order.

THE distribution of medals and prizes to the students of Guy's Hospital will be held at the hospital on Wednesday, July 12th, at 3.15 P.M. The governors and the medical staff are giving a garden party on the occasion and the prizes are to be distributed by Dr. P. H. Pye-Smith, F.R.S.

INVITATIONS to a Conference on the Prevention of Epidemic Small-pox, to be held at the Mansion House, London, on Tuesday, July 18th, at 3 P.M., have been issued by the Lord Mayor.

Dr. G. E. Herman, consulting obstetric physician to the London Hospital, has been elected an honorary member of the Gynecological Society of Chicago.

THE Long Fox Memorial Lecture for this year will be delivered by Dr. E. Markham Skerritt in November.

EPSOM COLLEGE JUBILEE.

ON Saturday last the jubilee of the opening of Epsom College was celebrated by a large gathering of old boys at the College. Close upon 250 arrived between 3 and 4 P.M. and many of the older ones were greatly interested in talking over old times and in observing the improvements introduced since their days. A large number of the visitors found their way to the cricket field where they witnessed the close of a match between the College team and Merchant Taylors' School. Refreshments were served in the headmaster's garden at 4.30, there was a short service in the chapel at 5.45, and a party of considerably over 200 sat down to dinner in the big school-room at 6.30 under the chairmanship of Mr. Henry Morris, one of the earliest scholars, and at present honorary consulting surgeon to the College. He was supported by the Earl of Rosebery, President of the College, Sir Richard Douglas Powell, Sir Constantine Holman, Dr. F. Needham, Dr. F. de Havilland Hall, Dr. J. H. Galton, and Dr. M. Baines, and by the following amongst other prominent old boys, Mr. H. Robertson, M.P., Surgeon-General A. M. Branfoot, C.I.E., I.M.S., Dr. Frederick Taylor, honorary consulting physician to the school, Mr. Bilton Pollard, Mr. George C. Croft, and Mr. C. L. Smiles, chairman of the Jubilee Committee. Archdeacon Thornton, the first headmaster of the College, was too unwell to be present, but he sent an interesting letter of congratulation on the successes achieved and of the progress made, with his affectionate remembrances to his old friends.

In proposing the toast of "His Most Gracious Majesty the King, Patron of the College," the CHAIRMAN referred to the fact that His Majesty had visited the College as a lad of close upon 14 years of age when his father, the Prince Consort, opened the College in 1855, and that His Majesty laid the foundation stone of the lower school in 1895. Moreover, the present Prince of Wales was following in the footsteps of his father, for so recently as in 1903 His Royal Highness had visited the College and had taken the chair at a festival dinner. The toast having been drunk with enthusiasm, the Chairman proposed the toast of the evening, "Success to Epsom College." In a long speech, during which unfortunately many guests were compelled to leave the room in order to catch the last train from the Downs station, he sketched the growth and educational progress of the College. He observed that when the College was opened there were only about 18 acres of land and the buildings accommodated 150 scholars; but now the College possessed close upon 80 acres and was able to accommodate from 300 to 350 boys, including those in the lower school. He gave an interesting account of the introduction of lectures in chemistry and natural philosophy about ten years after the opening of the College and of more time being allowed a few years later for the study of modern languages at the expense of classical studies. About this time the council built a proper laboratory and made large additions to the apparatus, a class-room fitted up as a laboratory having served the purpose for some years, and a year or two later the study of botany, the elements of physiology, and zoology was started. He referred to the numerous improvements which had been introduced in recent years and drew attention to the fact that these were in a great measure due to the efforts of the treasurer, Sir Constantine Holman. He observed that the College was now recognised as a school of science by the English Conjoint Board of the Royal Colleges of Physicians and Surgeons. In conclusion, he referred to the fact recently mentioned in our columns that when granting her patronage to the College 50 years ago Queen Victoria expressed the wish that the designation of the institution should be "The Royal Medical College," thus omitting the objectionable word "Benevolent," which existed in the title until 1903, when it was altered to "Epsom College."

In responding to this toast Lord ROSEBERY spoke as follows: Mr. Chairman and Gentlemen,—I speak to you under singular disadvantages to-night, because I have by some blunder of my own undertaken to do that which no man, however great, has ever been able to do, which is to eat two dinners; and I have the uneasy consciousness that for the last 40 minutes a dinner party has been waiting for me at my house. That will conduce, at any rate, to the brevity of my speech; but I am afraid that there is another reason for that brevity even more efficacious—namely, that I cannot, though president, speak with that internal knowledge of its arrangement which alone would justify me in detaining you. I do, indeed, as a neighbour take a great pleasure in visiting the College and watching the matches at cricket and football in which the College is so eminently distinguished, but I take no part in the teaching; and I am inclined to think that if it was known that I did take part in the teaching not only would it have a serious effect on the views of the parents of Epsomians but it might seriously tend to reduce the standard of the teaching itself, so I must lead you into other branches of education which are not touched on here. Well, gentlemen, I can, at any rate, speak with some knowledge not on the process by which Epsomians are turned out but of the result, and I venture to say that no finer body of young men is sent out into the world by any school than is

sent out by Epsom College. It turns out Englishmen and English gentlemen, healthy in mind and in body, fit to go anywhere and to do anything, and it is my belief that if the number of schools like Epsom College were multiplied, and if the number of scholars inside Epsom College were multiplied, it would be none the worse for this country or this Empire. I am sometimes puzzled by one very curious anomaly. In this country we have the best raw material in the world. We turn out annually thousands of young fellows splendid in physique, energetic in mind, and not ill-trained intellectually as compared with other nations, the most valuable body that a nation can have. Now, in an Empire like ours there should be an unlimited demand for such men. There is practically an unlimited need for such men and yet why is it that the demand and supply in this country do not coincide? You never sit next to parents at dinner who know the least in the world what they are going to do with their sons. It is the great problem of the age. While this is certainly true, and I, as a parent, speak with the utmost sympathy of the difficulty of finding proper avenues of employment for one's sons, some find it in the cricket field, some elsewhere. Still, I am, on the other hand, conscious that there is for almost all the young men I have been speaking of turned out by our public schools a round hole somewhere in the Empire if they could only find it. And it is, therefore, a difficulty which must be solved some day by some statesman, some legislator, or some educationist: the difficulty of finding some adaptation of the peg for the hole throughout the British Empire. As regards physique, at any rate, I can testify to this. I happened to be watching a cricket match here the other day—I speak under the correction of the captain whom I see present—when I saw a young fellow, who measures so many inches that I could not help thinking that Frederick the Great's father, who stuck at nothing to procure tall soldiers, would have kidnapped that young man from the ground without demur. I can speak with thorough belief of the way in which old Epsomians are conducting themselves in the various avocations which they have chosen. We have here a most splendid teaching establishment, headed by my friend Mr. Smith-Pearse, we have the healthiest situation in the world, and if the College does not develop as it should or as it might it can only, I think, be due to the timidity of parents who believe that the counter attractions of Epsom may have some deleterious influence on the tender years of their sons. If my voice can reach them from here let them be sure that the race week is a period of monastic seclusion to the boys of Epsom College, that no contamination is allowed to reach them. They, I believe, never know the name of the winner of the Derby until they have separated for the vacation when they learn it from tradition at home. And for those who intend to be medical men there is that rudimentary element of health, the Epsom well, which is supposed to have supplied Epsom salts to an admiring world. With these advantages, and without, so far as I know, any drawbacks, we may look cheerfully to the next jubilee.

ANNUAL DINNER OF THE EPIDEMIOLOGICAL SOCIETY.

THE fifty-fifth anniversary dinner of this society was held at the Grand Hotel, Trafalgar-square, London, W.C., on June 30th, the chair being occupied by the President, Dr. B. Arthur Whitelegge, C.B., His Majesty's Chief Inspector of Factories. There were also present Dr. E. F. Bashford, Dr. R. M. Beaton, Dr. W. A. Bond, Dr. G. S. Buchanan, Dr. H. T. Bulstrode, Dr. Dudley W. Buxton, Mr. Wolf Defries, Lieutenant-Colonel R. H. Firth, R.A.M.C., Mr. K. W. Goadby, Dr. W. J. Gow, Dr. W. H. Hamer, Dr. G. E. Herman, Mr. T. H. Kellock, Dr. T. N. Kelynack, Dr. H. R. Kenwood, Mr. John Langton (President of the Medical Society of London), Dr. R. Bruce Low, Dr. T. Glover Lyon, Dr. Hector W. G. Mackenzie, Mr. G. Millson, Sir Shirley F. Murphy, Dr. Arthur Newsholme, Colonel J. Lane Notter, R.A.M.C. (retired), Dr. J. Frank Payne, Sir Richard Douglas Powell, Bart., K.C.V.O., President of the Royal College of Physicians of London, Dr. H. Meredith Richards, Dr. James Robertson, Dr. John Robertson, Major Ronald Ross, C.B., F.R.S., Mr. W. N. Shaw, F.R.S., Mr. P. Sidney Spokes, Dr. R. D. Sweeting, Dr. John F. W. Tatham, Mr. D. Lewis Thomas, Dr. G. L. Turnbull, Mr. A. C. Waters, and Dr. Dawson Williams.

After the usual loyal toasts, "The Medical Departments of His Majesty's Forces" was proposed by Dr. PAYNE, who, in speaking of the Medical Department of the Navy, referred to the testimonial which Admiral Rodney gave to Gilbert Blane, physician to the English fleet, who was a candidate for a vacant physiciancy at St. Thomas's Hospital. The admiral wrote: "It was owing to Dr. Blane that the fleet at my command was kept in a condition ready to attack the public enemy." Dr. Payne had no doubt that an admiral of to-day would have to write in the same terms of the present Medical Department were the necessity to arise.

Colonel LANE NOTTER responded.

Dr. DAWSON WILLIAMS, in proposing "The Medical Societies," of which he observed there were 22, drew attention to the economy which would accrue could a satisfactory scheme of amalgamation be devised. He expressed the opinion that the poor attendances of the meetings of the medical societies were largely due to the fact that the proceedings were reported in the medical papers and he suggested the desirability of the exclusion of the medical press if the attendances were to be improved.

Sir RICHARD DOUGLAS POWELL, in responding, thought that these bad attendances were a growing evil and that some form of concentration was eminently desirable. He was not, however, in agreement with the proposer of the toast as to the exclusion of the medical press. In the old days reporting was very imperfect but now that the reporting was all that could be desired it was essential that the practice of thus recording the proceedings should be continued.

Mr. LANGTON, with whose name the toast was also coupled, pointed out that chaos, as regards the medical societies, began as far back as 1808. He hoped, however, that although amalgamation in practice was a much more difficult matter than in theory and was beset by many difficulties, financial and other, a scheme would be presented within the next few weeks which would afford a means of escape from the present unsatisfactory state of affairs.

Colonel FIRTH proposed "The Visitors" and Major ROSS, in responding, expressed the great pleasure which it had afforded him to find the brilliant researches of Colonel D. Bruce recognised in that day's birthday honours. Commenting generally upon investigations in the tropics, Major Ross accentuated the importance of encouraging the numerous younger men who for very little pay indeed were content to go forth on missions which were by no means free from risk and which in some instances had resulted in the death of the workers. He would like, too, to see more energetic action on the part of the Government with regard to the many places where malaria was at present rife but from which without serious difficulty it might be eradicated. In his view the medical profession was somewhat too backward in pressing the claims of science upon the public.

Mr. SHAW, the recently appointed director of the Meteorological Office, also acknowledged the toast and in discussing the relationship between epidemiology and meteorology, confessed that there was some truth in the statement made by the schoolboy who, when asked as to the nature of a barometer replied: "A barometer is an instrument shaped like a banjo; it is meant to foretell the weather *but it cannot foretell it for long.*" Although the Meteorological Office issued forecasts with regard to the weather which had an undoubted value there was nevertheless force in the schoolboy's criticism. Mr. Shaw thought that possibly the epidemiologist had been in the past somewhat too prone to associate outbreaks of disease with meteorological events which had immediately preceded the outbreak, whereas possibly such an outbreak might be partly due to an accumulation of influences some of which had been operative several months previously. As a suggestion in this direction he might make reference to the fact recently drawn attention to by him in the *Times* that the wheat crop of any given year was due, not to the weather of the preceding spring, but to the amount of rainfall in the preceding autumn—i.e., to an event which happened some ten months before the result, *quâ* the wheat yield, was apparent. It had been calculated that every inch of rainfall by washing out the nitrates from the soil was responsible for a loss of one and a quarter bushels of wheat per acre in England, an amount which in the mass meant a loss of some £300,000 to the farmer.

Dr. TATHAM, in proposing "The Epidemiological Society,"

took the opportunity of thanking the members for the honour which they had recently conferred upon him in electing him to fill the presidential chair in succession to Dr. Whitelegge. Dr. Tatham looked forward to the time when his office, the General Register Office, by furnishing general statistics as regards sickness, would be in a position to afford to the Epidemiological Society very considerable additional assistance in its researches.

Dr. WHITELEGGE, in replying and in discussing the enormous advances made in epidemiology since the foundation of the society in 1850, drew attention to the circumstance that curiously enough both the epidemiology and the bacteriology of the common cold had been practically neglected notwithstanding the fact that the indirect effects of this communicable condition must exercise a very substantial effect both on the sickness and mortality records. Research, however, extended first in one direction and then in another, and the most remarkable discoveries of recent years had doubtless been in relation to the part played by the insecta and protozoa in the distribution of disease. The society was, he was glad to report, in a decidedly flourishing condition. The attendances at the meetings had been better than ever before and the papers and discussions had been of a very high order. He alluded in eulogistic terms to the services rendered to the society by the honorary secretaries and treasurer—a compliment which was suitably acknowledged by Dr. BULSTRODE, Dr. HAMER, and Dr. SWEETING.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following are some of the principal amounts, additional to those already announced in THE LANCET, received at the Mansion House up to Wednesday evening, when the sum paid in came to £40,000:—

	£	s.	d.
St. Paul's Cathedral, with additions	4900	0	0
Christ Church, Lancaster-gate	1312	0	0
St. Jude's, South Kensington	505	0	0
St. Paul's, Onslow-square	396	0	0
All Saints, Ennismore-gardens	391	0	0
St. Paul's, Wilton-place, and St. Mary's, Graham-street	381	0	0
St. George's, Hanover-square	324	0	0
St. Mary's, Bryanston-square	320	10	0
Church of Annunciation, Marylebone	248	0	0
Union Chapel, Islington	236	0	0
St. Mark's, Hamilton-terrace	202	0	0
St. James's, Piccadilly	200	0	0
Holy Trinity, Tulse Hill	197	0	0
Holy Trinity, Brompton	194	0	0
Westminster Abbey	176	0	0
Roehampton Parish Church	161	0	0
Emmanuel Church, Wimbledon	160	0	0
St. Peter's, Brockley, with additions	146	0	0
St. Augustine's, Highbury	146	0	0
Christ Church, Mayfair	145	0	0
Holy Trinity, Sydenham	140	0	0
St. Mary's, Kilburn	137	0	0
St. Bartholomew's, Sydenham	134	0	0
St. James's, Kidbrook	131	0	0
Bromley Parish Church and Chapel of Ease	125	0	0
St. Paul's Presbyterian Church, Westbourne-grove	125	0	0
St. Peter's, Bayswater	116	0	0
St. George's, Bickley	112	0	0
St. John's, Penge	110	0	0
St. Mark's, North Audley-street	109	0	0
Aldenham Parish Church	109	0	0
St. Anne's, Soho	106	0	0
Ascension Church, Balham Hill	101	0	0
Mr. and Mrs. G. P. Gooch	100	0	0
"A. B."	100	0	0
St. John's Presbyterian Church, Forest Hill	100	0	0
St. Andrew's, Leytonstone	97	0	0
Immanuel Church, Streatham	95	0	0
Church of the Annunciation, Chislehurst	94	0	0
St. Mary's Parish Church, Stoke Newington	92	0	0
St. Michael's, Blackheath Park	92	0	0
St. John the Evangelist, Putney	87	0	0
Greek Church	85	0	0
St. Mark's, Reigate	82	0	0
Beckenham Parish Church	78	0	0
St. Mary's, Boltons, with additions	78	0	0
Collection at the London Commercial Sale-rooms	77	0	0
Bromley Congregational Church	76	0	0
Christ Church, Hornsey	71	0	0
St. Thomas's, Portman-square	68	0	0
The Oratory, Kensington	66	0	0
Stamford-hill Congregational Church	65	0	0
St. Luke's, Hackney	65	0	0
St. Saviour's, Denmark Park	65	0	0
St. Luke's, Nutford-place	63	0	0
Christ Church, Brondesbury	63	0	0
St. Margaret's, Lothbury	63	0	0
All Saints, North Peckham	62	0	0
St. Gabriel's, Warwick-square	62	0	0
Brockley Park Church Open-Air Mission	60	0	0
Heath-street Baptist Church, Hampstead	59	0	0
Emmanuel, West Hampstead	59	0	0
Old Malden Parish Church	58	0	0
St. Stephen's, Ealing	58	0	0
St. Mary Magdalen, Wandsworth Common	56	0	0
All Saints, Notting Hill	55	0	0
St. Saviour's, Brixton-hill	54	0	0
St. Paul, Finchley	54	0	0
Orpington Church	53	0	0
St. Saviour's Cathedral, Southwark	53	0	0
Messrs. J. H. Vavasseur and Co.	52	10	0
Highgate Presbyterian Church	52	0	0
All Saints, Margaret-street	51	0	0
St. Andrew's, Totteridge	50	0	0
St. Mark's, Marylebone	48	0	0
Crouch-hill Presbyterian Church	47	0	0
Kensington Congregational Church	47	0	0
St. Mary's, Hornsey Rise	46	0	0
Box outside Mansion House	46	0	0
St. George's, Campden-hill	45	0	0
St. Augustine's, Kilburn	45	0	0
Christ Church, Highbury	45	0	0
Chapel Royal, Hampton Court	43	0	0
St. Matthias, Kensington	42	0	0
St. Cuthbert's, West Hampstead	41	0	0
St. Paul's, Harringay	41	0	0
St. Luke's, West Hampstead	41	0	0
Bromley Presbyterian Church	41	0	0
Hayes, Kent, Parish Church	41	0	0
Hornsey Parish Church	41	0	0
St. Mary's, Acton	40	0	0
Clapham Congregational Church	40	0	0
St. Matthew's, Sydenham	38	0	0
Christ Church, Southgate	38	0	0
Brixton Wesleyan Circuit	38	0	0
St. George's, Tufnell Park	37	0	0
St. Jude's, Chelsea	36	0	0
St. Matthew's, Brixton	36	0	0
Ilford Parish Church	35	0	0
St. Mary's Parish Church, Islington	35	0	0
Gray's Inn Chapel	35	0	0
St. Mary Magdalene's, Munster-square	35	0	0
King's Weigh House Church	34	0	0
Westminster Cathedral	33	0	0
St. Luke's, Holloway	33	0	0
Putney Parish Church	32	0	0
St. German's, Blackheath	32	0	0
Monken Hadley Parish Church	32	0	0
St. Michael's, Stockwell	32	0	0
St. Paul's, Wimbledon Park	31	0	0
St. Phillip's, Sydenham	30	0	0
Park Chapel, Chelsea	30	0	0
Woodford Parish Church	30	0	0
St. Mary Magdalen, Holloway	29	0	0
All Saints, Norfolk-square	29	0	0
Clapton Park Congregational Church	29	0	0
St. Mary-le-Park, Battersea	28	0	0
All Saints, Upper Norwood	28	0	0
Hammersmith Parish Church	27	0	0
South Woodford Congregational Church	26	0	0
St. Magnus the Martyr, London Bridge	26	0	0
Finsbury Park Congregational Church	26	0	0
Chigwell Parish Church	26	0	0
Lewisham High-road Congregational Church	25	0	0
Holy Innocents', High Beech	25	0	0
Keston Parish Church	25	0	0
Belgrave Presbyterian Church	25	0	0
Hersham Parish Church	25	0	0
Whitfield Tabernacle, Tottenham Court-road	24	0	0
Kentish Town Parish Church	24	0	0
St. Barnabas's, Clapham-common	24	0	0
St. Simon's, Chelsea	24	0	0
Camberwell Parish Church	23	0	0
St. Paul's, Canonbury	23	0	0
St. Anselm's, Pinner	23	0	0
St. George's Garrison Church, Woolwich	23	0	0
St. Barnabas, S. Lambeth	22	0	0
Upper Holloway Baptist Chapel	22	0	0
All Saints, Child's Hill	22	0	0
Muswell Hill Presbyterian Church	22	0	0
Muswell Hill Congregational Church	22	0	0
St. John's, Upper Holloway	22	0	0
St. Matthias, Upper Tulse Hill	21	0	0
Brentwood Parish Church	21	0	0
Holy Trinity, Northwood	21	0	0
Munster Park Wesleyan Chapel	21	0	0
Christ Church, Woburn-square	21	0	0
Nutley Lane, Reigate	21	0	0
Chipping Barnet Parish Church	21	0	0
Church of the Ascension, Lavender Hill	21	0	0
Vintners' Company	21	0	0
East Dulwich Wesleyan Chapel	20	0	0
Charterhouse Chapel	20	0	0
Christ Church, Westminster	20	0	0
St. Saviour's, Holly Park	20	0	0
St. Luke's, Bromley, Kent	20	0	0
St. Augustine's, Grove Park	20	0	

THE IMPERIAL CANCER RESEARCH FUND.

THE fourth meeting of the general committee of the Imperial Cancer Research Fund was held at Marlborough House on July 5th and was presided over by H.R.H. the PRINCE of WALES, the President of the Fund.

Those present included Lord Strathcona, Sir William Broadbent, Sir William S. Church, Sir Henry G. Howse, Sir Alfred Cooper, Mr. James Coats, Mr. H. L. Florence, Mr. H. J. Read, Dr. J. F. W. Tatham, Mr. J. Tweedy, President of the Royal College of Surgeons of England, Dr. J. Rose Bradford, Mr. H. T. Butlin, Mr. W. Watson Cheyne, Professor J. R. Dewar, Mr. J. Langton, Mr. R. Littlejohn, Professor J. McFadyean, Professor A. E. Mettam, Mr. J. A. Mullens, Dr. P. H. Pye-Smith, Dr. T. T. Whipham, Professor G. Sims Woodhead, Mr. R. Brudenell Carter, Mr. E. R. Frere, Mr. Henry Morris (honorary treasurer), Dr. E. F. Bashford (general superintendent of the research work), Dr. W. Cramer, and Mr. F. G. Hallett (secretary).

Sir WILLIAM CHURCH, Bart., K.C.B., chairman of the executive committee, moved the adoption of the annual report and in doing so gave an account of the proceedings of the executive committee and of the scientific investigations during the year. "Cancer investigation," he said, "has been carried out during the year in close conformity with the plan determined on in the second year of our research and may be conveniently described as falling under three main heads—the statistical, the histological, and the experimental. Additional data have been accumulated since, confirming the opinion that cancerous growths cannot be associated with any peculiarities of diet. Further evidence has been obtained that in considering the frequency of the occurrence of cancer due regard must be paid to the individual ages of the population under consideration and when it occurs in young subjects to the organs in which the disease manifests itself, cancer in young persons occurring for the most part in tissues and organs which lose their functional activity in early life and normally undergo degeneration and more or less complete absorption. The continued tabulation of the cases of malignant growth in the metropolitan hospitals, in which the presence of cancer has been proved by microscopical examination, has confirmed the opinion that in cases of internal growths the errors of diagnosis, even when under the charge of most experienced and accomplished observers, are much greater than would be expected and in no small degree explain many of the reputed cases of cure. Dr. Tatham of the General Register Office has had the national statistics of malignant disease rearranged in a manner which will enable them to be compared with the figures obtained from hospitals and other sources and thus afford a broader basis for the control of statistics. Histological, cytological, and experimental investigations have been vigorously carried on and have yielded results of remarkable interest, raising questions in connexion with malignant disease which had hardly been suspected before. The results which had been obtained in mice pointed to the necessity for yet more closely studying the processes of cell multiplication, for in the means which permit this to continue incessantly appears to lie the mystery we are in search of. Certain cancerous tumours are found occurring sporadically in mice which can be transplanted into other mice. In this way it has been found possible to perpetuate a malignant growth through successive generations of mice and thus obtain material for observation and study. Every transplantation does not succeed, very far from it, and at present we are not in a position to say what determines the success or failure of the experiment. Slight racial differences in the mice seem to have a distinct bearing on the success of transplantation. For example, Professor von Leyden of Berlin was kind enough to send us a live mouse which had a tumour which had been transplanted through three generations in Berlin wild mice, together with 20 Berlin wild mice. 47·3 per cent. of the transplantations made into the 20 Berlin wild mice were successful, whilst the transplantations into London wild mice gave only 1·4 per cent. of success, and in London tame mice the proportion (0·54 per cent.) was even less. When the initial difficulty of transplanting a tumour from one strain of mice to another has been overcome the percentage of success reaches approximately that which obtains when mice of the same strain are used. Careful examination of transplanted tumours has shown that a continuous power of growth is manifested by the transplanted cells and that the new growth originates from them and not from the cells of the host irritated or stimulated by the transplanted material; the reaction caused in the tissues of the host affords the means by which the transplanted cells are nourished. Another fact which is of great importance is that whilst in mice, as in man, spontaneous malignant growths occur in the aged rather than in the young, transplanted growths flourish as well, or better, in young and vigorous mice. I will not weary you with a description as to the differences between these mouse tumours and what are called infective granulomata; sufficient to say here that in the infective granulomata it is the cells of the infected animal which take on abnormal growths. It has long been recognised that malignant growths produce their injurious effects by their power of continuous cell multiplication. The artificial propagation of malignant growths is a demonstration of this power of cell division, for by its means we have from a single mouse tumour produced an amount of tissue equal in bulk to more than a thousand mice. As bearing on the infectiousness of cancer, it may be mentioned that large numbers of healthy mice have been kept for long periods in the same cages with mice suffering from both sporadic and inoculated tumours and yet in no single instance did the malignant growth occur in an uninoculated mouse. In connexion with the treatment of malignant growths a large amount of experimental work has also been done. The action of normal sera upon cancer cells outside the body does not prevent their growth when transplanted into the body, but subjecting them to the action of an immunising serum has in some cases deprived the cells of the power of growth, but no definite action has yet been observed when an immunising serum has been injected into a mouse suffering from cancer. The action of radium and radio-active solutions has been carefully studied and there is no doubt that both at times exert an influence on the growth and development of both normal and tumour tissues. No evidence, however, has yet been obtained that radium emanations have any selective or special action on tumour tissues, whilst the amount of radio-active solutions which is necessary to produce any action on the tissues is far in excess of what can be introduced into the body with safety. The Research Fund is indebted to Sir William Ramsay for preparing and placing radio-active solutions at its disposal. The expenses of the research must increase if we are to keep the highly trained staff which is necessary. We have lost the services of Dr. Cramer, who has accepted the appointment of Lecturer on Physiological Chemistry at Edinburgh; whilst Dr. Murray, I am happy to say, would not leave us, although offered a more valuable appointment as director of the Liverpool Cancer Research Fund. It places our research in very disadvantageous circumstances if we are unable adequately to remunerate the services of highly skilled members of our staff whose loss we should be unable to replace. Our work during the past year has been greatly aided by the collaboration of foreign investigators, more especially by Professor Borrel of the Institut Pasteur, Professor Jensen of Copenhagen, and Professor von Leyden and Dr. Michaelis of the German Cancer Committee. Very valuable assistance has also been afforded by the India, Foreign, and Colonial Offices, as well as by other public offices and bodies, and by private individuals, both in this country and abroad, but I regret to say that the unaccountable action of the postal authorities in refusing to transmit perfectly innocuous postal packets addressed to the research will disorganise the arrangements which, through the coöperation of the India, Foreign, and Colonial Offices, had been made for the transmission of specimens from India, the colonies, and other foreign countries. In conclusion, I think I may venture to say that the cytological and experimental work done during the past year marks a real progress in our knowledge of the mode of growth in certain forms of malignant disease. The malignancy of cancer appears to consist in the inherent power the cells possess of division and multiplication. If we can find out the nature of this apparently unlimited growth it is not unreasonable to hope that we may be successful in obtaining means for checking or limiting their proliferation and thus neutralising their malignancy."

Mr. TWEEDY, in seconding the motion, said he thought that

all the subscribers to the Fund on reading the general report, and more particularly the scientific reports, must feel that this body was making distinct progress in the solution of the great mystery of the origin and the nature of cancer. Many of those who did not understand the processes of scientific investigations might desire that they should attain their goal at one step, as it were, but knowledge was not to be gained in this way. Whether they would ever attain the goal aimed at, or when, no man living could say, but he was convinced that this body for the investigation of the causation of cancer was proceeding by the right method—the method of science—which must give them true knowledge so far as it went. In the end he hoped that they would obtain the knowledge which they all so much desired.

The report was unanimously adopted.

Lord STRATHCONA proposed a vote of thanks to the chairman and members of the executive committee, the subcommittees, the honorary treasurer, and others who had assisted in the work of the Fund during the past year and expressed the gratification of the supporters of the Fund at having Sir William Church at the head of the executive committee.

Mr. LITTLEJOHN seconded the motion which was carried unanimously.

Sir WILLIAM BROADBENT proposed a motion as an amendment to the scheme of the Fund whereby the executive committee would be able to retain the services of valuable *ex-officio* members, when their terms of office having expired, their membership of the executive committee of the Fund also ceased. The amendment also proposed to add to the executive committee other persons likely to assist in the management of the Fund, for whose election at present no means were provided.

The motion was seconded by Mr. LANGTON and was unanimously agreed to.

Mr. MORRIS, in moving that the best thanks of the meeting be given to His Royal Highness for presiding and for permitting the meeting to take place at Marlborough House, said that they were all aware that from the inception of this scheme the hearty sympathy and goodwill of His Royal Highness had been given towards the establishing of a cancer investigation. As soon as the scheme was sufficiently advanced the Prince of Wales accepted the presidency, and on every occasion when opportunity had offered he had been good enough to make a gracious and encouraging mention of the work and of the objects of the Fund.

Mr. FLORENCE seconded the motion which was carried with acclamation.

The PRINCE OF WALES, in reply, said: My Lord and Gentlemen,—I beg to thank Mr. Henry Morris and Mr. Florence for the kind words they have used in proposing and seconding this vote and I thank you all sincerely for the way you have received it. I am very glad, as your President, to meet here again the members of the general committee of the Imperial Cancer Research Fund and to hear the very satisfactory record of the past year's work. Naturally, you will not expect me to touch upon the highly technical subjects dealt with in the annual report and in Dr. Bashford's scientific reports which have been circulated among you. But we all can recognise in them much evidence of laborious and careful investigation and of sure progress. These reports cover a very large field of investigation and show that no line of inquiry, however unpromising, is being overlooked. The search after fresh facts has been stimulated by the rejection during the past three years of certain fallacies which previously obscured the true problem and have now been exposed. One result obtained shows that cancer is not transferable from one individual to another as if it were an infectious disease. The destruction of preconceived ideas of the origin of cancer has cleared the way for further advance, while the number of hitherto unsuspected facts certainly gives hope of final success. The researches in the various British colonies and protectorates continue to yield information of increasing value and prove that the investigation is truly an Imperial one. Last year I mentioned that India had recently been included in the scope of inquiry. Since then India has contributed additional and interesting facts. Amongst the various races and castes of that great empire, differing so widely in customs, mode of living, and diet, cancer has been shown to be not uncommon. It is found in vegetarians as well as in those who eat fish and meat. Increasing interest in the question is being manifested in the larger self-governing colonies It is important to notice that owing to our possessions throughout the globe we are in a more favourable position than other nations for studying this disease, which manifests itself irrespectively of the varying conditions of life. These opportunities are being fully utilised not only for our own information but to the advantage of the scientific investigators of other nations less favourably situated. Many reputed remedies for cancer have been sent to our laboratories during the past year for examination not only from this country but from India, Australia, South Africa, and America. Unfortunately any value that they may have possessed to those who believed in them has been based upon the application of the term "cancer" to diseases which are not true malignant new growths. They have not survived the test of scientific examination. It is gratifying to know that our work is being carried out in harmonious conjunction with that of French, German, and American scientists. I feel sure that the committee share my feelings of satisfaction in having secured the retention of Sir William Church's services on the executive committee, of which he has been re-elected chairman. We have to acknowledge with gratitude the kindness of the Royal College of Physicians and the Royal College of Surgeons in placing their laboratories at the disposal of the Fund. In conclusion, I have to assure the executive committee, general superintendent, treasurer, and secretary of my deep appreciation of the eminent services rendered by them in their steadfast endeavours towards the solution of what still remains one of the greatest problems of human life.

The proceedings then terminated.

ASYLUM REPORTS.

Ayr District Asylum (Annual Report for 1904).—The report of the medical superintendent, Dr. C. C. Easterbrook, states that the average number of patients daily resident was 517. The admissions numbered 140. 56 were discharged recovered, the recovery rate being 44·8 per cent. on the admissions minus transfers from other institutions and minus admissions from private care of congenital and chronic cases. Ayrshire, it appears, stands twenty-eighth amongst the 33 counties of Scotland arranged according to the prevalence of insanity in them and is therefore one of the sanest. Dr. Easterbrook goes exceptionally fully and with copious statistical tables into the causation of insanity in the admissions. Insanity in the family was acknowledged in 36 per cent. of the males and 44 per cent. of the females. "Insane and neurotic constitution" was present in 40 per cent., and in 21 per cent. there had been one or more previous attacks of insanity. Alcohol was the cause of the attack in only 13·7 per cent., as against 25·9 per cent. in the previous year. The decrease in alcoholic cases mainly accounts for a fall below the average of the admissions for 1904 and this decrease is explained by the depression of trade during 1904. The deaths during the year numbered 59 and consent to necropsy was only refused in six. Only seven deaths occurred from pulmonary tuberculosis. The infirm and acute wards of this asylum appear from the report of the Commissioners in Lunacy to be overcrowded greatly, but a new hospital is to be erected.

Surrey County Asylum, Brookwood (Annual Report for 1904).—From the report of Mr. James E. Barton, the medical superintendent, it appears that the average number resident in this asylum during the year was 1309. The admissions numbered 346 (including 35 transfers from other asylums and two found "not insane"), the discharges 161, and the deaths 129, this last figure giving a proportion of 9·86 per cent. on the daily average number resident, which is slightly lower than the average rate in English asylums. The type of insanity in the admissions was, as for several years past, very unfavourable, about 25 per cent. only being considered to have reasonable prospect of recovery. Out of 22 cases of general paralysis, which were all that occurred amongst the 346 admissions, a history of syphilis was obtained in eight. Hereditary predisposition is stated to have existed in only 74 cases (21 per cent., or 24 per cent. excluding transfers and those "not insane"), which is certainly an unusually small proportion. Figures on this point are notoriously untrustworthy, depending as they do upon the statements of patients' relatives. The

recovery rate, calculated as is usually done, was 30·64 per cent. on the admissions. The Commissioners in Lunacy report that the asylum is maintained in very good order. Some important improvements to meet the contingency of an outbreak of fire have been carried out. The weekly charge for home patients is 12*s.*, which is high for a county asylum.

Looking Back.

FROM

THE LANCET, *SATURDAY*, July 7, 1827.

The answers to some of the queries propounded by the Royal Commissioners[1] are extremely curious and amusing, as showing the coolness with which these Northern Professors assume and defend the most ridiculous of all absurdities. They distinctly state, that a man's chance of success in his profession is in the inverse ratio of his attainments—directly opposed to his merits and his talents! One of them, Dr. Alison, Dean of the Faculty of Medicine, mentions this as "a general fact, of which evidence can be adduced!" And how does the reader think this "general fact" is assumed? Why, on the ground that the general practitioners are more employed than the Edinburgh graduates, who, according to Dr. Alison, have a world of scientific attainments which the former are supposed to want! His graduates, he says, are oftener surpassed in practice by men who are their inferiors, than by men who are their superiors in general literature and science; he would say, *much oftener*. But assuming all this to be true, that in the lottery of physic the chance of a man who holds ten tickets is decidedly worse than that of one who is possessed but of five—which by-the-bye is absurd—it does not follow that a person taking a doctor's degree, which is in some respects a *literary* degree, should not be grounded in literature and general science; for wanting these the degree of *doctor* is as much abused as his Majesty's head upon a bad shilling. What would they have? They surely do not pretend that practical medicine can be best learned at Edinburgh, and they do not wish to enforce any great degree of literary study; yet, forsooth, the *gradus doctoris* is to be the stamp of superior excellence in both! The day will come, it has already dawned upon us, when the empty distinctions of colleges, which were probably of some use during the dark ages, shall be valued as they merit, just as the glimmering midnight-taper is unseen or disregarded in the meridian sun; but in the meantime we cannot see the difference between an *unlearned* doctor, a doctor unacquainted with Greek and Latin, polite literature, and the arts, which Dr. Alison thinks he may be—and the disgraceful, but well known Eady, neither of them being what he pretends to be, nor what the ignorant give him the credit of being. As long as a knowledge of Greek and Latin is expected from a gentleman, so long, at least, will it be from the physician, and there are many reasons, strictly professional, which might always render such knowledge desirable, although no invidious contrast were drawn and no such acquirements expected; of course it is a great error to give more attention to the extra-professional departments of literature and science than can be conveniently spared; but as these things are usually studied in early life, and furnish a calm and delightful retreat from the severer studies, anxieties, and occupations inseparable from our calling, we, for our parts, (Dr. Alison may think as he pleases), should be very loth to have been altogether without them.[2]

[1] The Royal Commission for visiting the Universities and Colleges of Scotland.

[2] Excerpt from leading article.

ROYAL INSTITUTION.—A general monthly meeting of the members of this institution was held on July 3rd, Sir James Crichton-Browne, treasurer and vice-president, being in the chair. Baroness Gray was elected a member. The special thanks of the members were returned to Sir Andrew Noble, K.C.B., F.R.S., for his donation of £100 to the fund for the promotion of experimental research at low temperatures, and to Mr. Rollo Appleyard for his gift of a portrait of the late Professor J. D. Everett, F.R.S., M.R.I.

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

County Borough of St. Helens.—The St. Helens milk depôt has not, Dr. J. J. Buchan reports, been extensively patronised during 1904, although it was kept prominently before the public during that time. The number of children using the milk continuously was 160 and more than half of these—i.e., 86—were, when first taken to the depôts, suffering from gastro-intestinal disorders consequent upon hand-feeding. This point is a very important one, as it has a distinct bearing upon the statistics furnished in the following table:—

Year.	Number of children on books.	Death-rate per 1000 among children at depôt.	Infantile death-rate.
1899	232	103	157
1900	332	102	188
1901	282	106	175
1902	200	82	167
1903	183	54	137
1904	160	68	174

Dr. Buchan infers from these figures that "had the ordinary death-rate in the borough in each year occurred among the users of the milk the deaths for these six years would have been increased by 109; in other words, there are 109 children living now who would have been dead but for the infant milk depôt." Without wishing for a moment to detract from the good work done by the depôt we are afraid that this method of presenting the gain is a little too optimistic. There are, of course, many critics who would take exception to these figures altogether and who would say that the children are selected in that they belong to mothers who have sufficient care for their lives to take them to the depôt at all, whereas many of the mothers who do not thus take their children belong to the neglectful class amongst which there is naturally a high infantile mortality. But this criticism seems to be met in the present case by the statement that more than 50 per cent. of the children were suffering from gastro-intestinal disorders. Be this as it may, we are hardly justified in asserting that the 109 children who did not die while they were attending the depôt are still alive. To say this is to imply that all children die from errors in diet. The main difficulty in connexion with the St. Helens depôt is that of distribution at convenient centres, and apparently the Dairymen's Association, which was approached on the subject, was not able to render assistance. The amount falling on the rates by the operations of the depôt during 1904 was £176 3*s.* 7*d.*

Metropolitan Borough of Woolwich.—This borough council now maintains three beds at Peppard Common sanatorium but Dr. Sidney Davies states that as regards cure sufficient time has not elapsed to form a trustworthy opinion. He adds, however, that of 17 patients who have been in the sanatorium three are still at the institution and three have died. Of the remaining 11 all were much improved in weight and other ways by their stay. Two are at home apparently quite well—one is at work and the other is seeking work. Four have relapsed since their return. Of these one is now in the Brompton Hospital, one is at work but getting worse, and two are being treated at home. In three cases the treatment did not arrest the disease, although it improved the patient's general condition. Dr. Davies thinks that, although isolation in this sanatorium may prevent the infection of other members of the same family and afford education in curative and preventive measures, it cannot be expected that three months' treatment will, as a rule, complete the cure. For this he regards six months at least as being necessary.

County Borough of Croydon.—Dr. H. Meredith Richards makes a contribution in his current annual report to the discussion as to the value, if any, of isolation hospitals for scarlet fever. He divides the cases which occurred in 1904 into two groups. In the "hospital" group—i.e., in the group in which the patients were isolated in hospital—there were 298 susceptible children (under 14 years of age) left at home after removal of the primary

case or cases. In the "home" group there were only 50 such susceptible children at home on the notification of the primary case or cases. In the "hospital" group 63, or 21·2 per cent., of the susceptible children developed scarlet fever after removal to hospital of the primary case, while in the "home" group 19, or 38 per cent., developed the disease. Dr. Richards regards these figures as showing the advantage of hospital isolation and he points out that the majority of the "home" group consisted of patients who could be satisfactorily nursed at home. Certainly the figures are of value but they would, we think, have been more trustworthy had the susceptible children been split up into age groups and the incidence on each age group for both classes furnished. Dr. Richards does not think highly of the midwife. He tells us that during 1904 the appliances of the Croydon midwives were inspected and that in nearly every instance the cases, mainly through ignorance as to the meaning of the words used in the rules, were improperly kept. Several of the midwives being unable to write had to have their forms filled up by deputy. Many of the women did not possess the instruments which they are required to take with them, but this omission Dr. Richards does not regret as, in his opinion, the women are totally ignorant of the uses to which to put the instruments. Dr. Richards has been appointed medical adviser to the education authority, his duties being (*a*) to report on the sanitary condition of the schools and the general health of the scholars; (*b*) to examine blind, deaf, and defective children; (*c*) to examine plans for altering or erecting school buildings; (*d*) to examine pupil teachers selected for appointment; (*e*) to examine truant children; (*f*) to visit any employé absent through illness; (*g*) to examine children stated to be physically unfit to attend school; and (*h*) to advise the committee when required to do so.

County Borough of Bournemouth.—The desire of the people of Bournemouth to consume what they think is a "rich" milk is well illustrated by the fact that 64·8 per cent. of the samples purchased and examined during 1904 were artificially coloured with annatto. We should have thought that the educated class which forms such a substantial portion of the total population of Bournemouth would have had more discrimination in the matter of natural milk. It is, however, on the other hand, gratifying to read that for the first time for several years all the samples of milk analysed were found free from preservatives; presumably formalin was looked for as well as boric acid.

Edmonton Urban District.—Dr. A. W. J. MacFadden, commenting upon the notification of pulmonary tuberculosis, remarks, "Compulsory notification under the Act of 1899 has in most cases been preceded by a probationary period of voluntary notification during which the benefits of the system have become apparent and its opponents have been reconciled to the inclusion of phthisis in its proper category—namely, that of the compulsorily notifiable diseases." But it is news to us that pulmonary tuberculosis is a compulsorily notifiable disease in any place other than Sheffield, and even there the disease is not subject to any of the penal clauses of the Public Health Act. Perhaps Dr. MacFadden will kindly furnish in his next annual report a list of the places in which the disease in question is notifiable. The Edmonton district council has provisionally arranged to take up three beds at the proposed Middlesex sanatorium. It seems almost a pity that some of the beds at the Mount Vernon Sanatorium at Northwood cannot be utilised by the sanitary authorities in Middlesex.

Plympton St. Mary Rural District Council.—Mr. S. Noy Scott, speaking of sanatoriums for consumption, says, "Since my last report another year's experience has been gained of the 'sanatorium treatment' and I am forced to state that in spite of much good that can legitimately be assigned to such institutions yet there seems to be a steadily growing opinion that the great expectations which were at first formed of them were exaggerated ones, and that the time has come for a thorough investigation of the whole question. No one doubts that the methods on which sanatorium treatment is based—viz., unlimited fresh air, abundant feeding, and good general hygiene—are absolutely right, but many accurate observers are expressing the opinion that these methods can be more easily obtained by a much less costly and extravagant system than is at present in vogue, and, further, that in building sanatoria we are using money and energy which could be far more beneficially spent in such prime preventive measures as well-built cottages on suitable sites." Seeing that there is a sanatorium for Devonshire near Brent it would have been perhaps more helpful had Mr. Scott told us something as to the after-history of the cases treated at that institution.

Borough of Eastbourne.—Dr. W. G. Willoughby thinks that a sanatorium for consumption should be used largely on educational lines and not merely as an institution to replace the workhouse infirmary. Admission to a sanatorium should, in his opinion, be limited to ratepayers of some years' standing and he evidently sees that otherwise consumptive patients might be attracted to Eastbourne were a sanatorium erected there. He points out, however, in connexion with the question of providing such an institution that "the decrease in consumption commenced long before sanatoria became the fashion, by improved sanitation, and after all the object of a sanitary authority should be to make every house and the whole borough as sanitary as a sanatorium." Perhaps this is a somewhat extreme view, since the fresh country air is one of the essentials of the sanatorium treatment and this is difficult to procure in an existing town.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 6496 births and 379 deaths were registered during the week ending July 1st. The annual rate of mortality in these towns, which had been 13·5, 13·4, and 13·0 per 1000 in the three preceding weeks, further declined to 12·7 per 1000 last week. In London the death-rate was 12·0 per 1000, while it averaged 13·0 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 6·8 in Willesden, in Hornsey, in Leyton, and in Handsworth (Staffs), 7·2 in East Ham, 7·5 in King's Norton, and 7·6 in East Ham and in Walthamstow; the highest rates were 17·5 in Stockport and in Tynemouth, 17·6 in Blackburn, 18·1 in Wigan, 19·1 in Merthyr Tydfil, 20·7 in Middlesbrough, 21·2 in Sunderland, 23·1 in West Bromwich, and 23·9 in Stockton-on-Tees. The 3793 deaths in these towns last week included 371 which were referred to the principal infectious diseases, against 413, 355, and 348 in the three preceding weeks; of these 371 deaths, 120 resulted from measles, 89 from diarrhœa, 72 from whooping-cough, 39 from scarlet fever, 32 from diphtheria, 18 from "fever" (principally enteric), and one from small-pox. In Tottenham, Leyton, Brighton, Southampton, Burnley, Halifax, and in ten other smaller towns, no death from any of the principal infectious diseases was registered, while they caused the highest death-rates in West Bromwich, Bootle, Warrington, Sheffield, Middlesbrough, and Sunderland. The greatest proportional mortality from measles occurred in West Bromwich, Warrington, Barrow-in-Furness, Sheffield, and Sunderland; from scarlet fever in Bootle; from whooping-cough in Oldham, Preston, and Middlesbrough; and from diarrhœa in Bootle and Rhondda. The mortality from diphtheria and from "fever" showed no marked excess in any of the large towns. One fatal case of small-pox was registered in London but none in any of the large provincial towns. The Metropolitan Asylums Hospitals contained four small-pox patients at the end of last week, against nine, seven, and six at the end of the three preceding weeks; one new case was admitted during the week, against three, three, and one in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2285, 2356, and 2427 on the three preceding Saturdays, had further increased to 2473, on Saturday, July 1st; 334 new cases were admitted during the week, against 269, 292, and 325 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 191, 189, and 144 in the three preceding weeks, further declined last week to 140, and were six below the number in the corresponding period of last year. The causes of 36, or 1·0 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Nottingham, Manchester, Leeds, Hull, Newcastle-on-Tyne, and in 51 other smaller towns; the largest proportions of uncertified deaths were registered in Hanley, Liverpool, Sheffield, Sunderland, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal

Scotch towns, which had been 16·4, 15·7, and 15·1 per 1000 in the three preceding weeks, rose again to 16·5 per 1000 during the week ending July 1st, and was 3·8 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·2 in Perth and 14·7 in Edinburgh and in Leith, to 18·2 in Glasgow and 19·3 in Greenock. The 555 deaths in these towns included 31 which were referred to whooping-cough, 17 to measles, 14 to diarrhœa, two to "fever," and one to diphtheria, but not any to small-pox or scarlet fever. In all 65 deaths resulted from these principal infectious diseases last week, against 62, 74, and 60 in the three preceding weeks. These 65 deaths were equal to an annual rate of 1·9 per 1000, which was 0·7 per 1000 above the mean rate last week from the principal infectious diseases in the 76 large English towns. The fatal cases of whooping-cough which had been 23, 29, and 18 in the three preceding weeks, rose again last week to 31, of which 22 occurred in Glasgow, five in Edinburgh, and two in Greenock. The deaths from measles, which had been 17, 26, and 18 in the three preceding weeks, further declined to 17 last week, and included ten in Glasgow, five in Edinburgh, and two in Perth. The fatal cases of diarrhœa, which had been 15 in each of the two preceding weeks, decreased last week to 14, of which eight were registered in Glasgow, two in Dundee, and two in Leith. The deaths from "fever," which had been three, two, and three in the three preceding weeks, declined to two last week and were both registered in Greenock. The deaths referred to diseases of the respiratory organs in these towns, which had been 89, 63, and 74 in the three preceding weeks, declined again last week to 66, and were 12 below the number in the corresponding period of last year. The causes of 16, or nearly 3 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19·3, 17·2, and 17·9 per 1000 in the three preceding weeks, declined again to 14·9 per 1000 during the week ending July 1st. During the past 13 weeks the death-rate has averaged 20·4 per 1000, the rates during the same period being 14·3 in London and 16·1 in Edinburgh. The 108 deaths of persons belonging to Dublin registered during the week under notice were 22 below the number in the preceding week and included seven which were referred to the principal infectious diseases, against five, three, and six in the three preceding weeks; of these, two resulted from measles, two from diarrhœa, and one each from diphtheria, from whooping-cough, and from "fever," but not any from small-pox or scarlet fever. These seven deaths were equal to an annual rate of 1·0 per 1000, the death-rates last week from the principal infectious diseases being 1·1 in London and 1·7 in Edinburgh. The deaths from measles, diphtheria, "fever," and diarrhœa corresponded in each case with the numbers in the preceding week; one fatal case of whooping-cough was registered, against two, two, and none in the three preceding weeks. One inquest case and two deaths from violence were registered; and 43, or more than a third, of the deaths occurred in public institutions. The causes of seven, or more than 6 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon Francis Austen Joans has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in His Majesty's Fleet (dated May 27th, 1905).

The following appointments are notified:—Fleet Surgeons: G. D. Twigg to the *Victory* and P. B. Handyside to Chatham Hospital. Staff Surgeons: S. T. Reid to Chatham Hospital; J. C. Darston to the *Flora*; and R. J. MacKeown to the *Vivid*. Surgeons: P. W. MacVean to the *Niobe*; A. A. Forrester to Chatham Hospital; H. W. Hull to the *Pathfinder* on commissioning; J. H. Jones to the *Pyramus*; W. M. Keith to the *Eclipse*; and W. L. Hawkins, lent to the *Speedy*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel L. E. Anderson is appointed to the medical charge of the Cambridge Hospital, Aldershot, and to command No. 1 Company, vice Lieutenant-Colonel H. W. Hubbard. Major J. D. Ferguson, D.S.O., is appointed second-in-command of the Depôt and Training School, Aldershot, vice Major F. J. Greig.

INDIAN MEDICAL SERVICE.

Bengal: Majors to be Lieutenant-Colonels (dated April 1st, 1905): Francis James Drury, Herbert Jekyl Dyson, Frederick Arthur Rogers, D.S.O., and Edward Richard William Charles Carroll.

The King has approved of the retirement from the service of the undermentioned officers:—Surgeon-General George William Robertson Hay (dated Dec. 27th, 1904); Colonel Charles Henry Joubert (dated March 29th, 1905); Lieutenant-Colonel George Spiers Alexander Ranking (dated May 30th, 1905); Lieutenant-Colonel George Tucker Thomas (dated June 26th, 1905); Lieutenant-Colonel Arthur James Sturmer (dated April 12th, 1905); Lieutenant-Colonel Cooverjee Cowasjee Vaid (dated May 18th, 1905); and Lieutenant-Colonel Upendra Nath Mukerji (dated Feb. 17th, 1905).

VOLUNTEER CORPS.

Rifle: 3rd Volunteer Battalion the Gloucestershire Regiment: Surgeon-Lieutenant (Surgeon-Captain, Army Medical Reserve of Officers) C. R. Browne to be Surgeon-Captain (dated July 5th, 1905). 5th (Glasgow Highland) Volunteer Battalion, the Highland Light Infantry: Surgeon-Lieutenant W. Ritchie to be Surgeon-Captain (dated July 5th, 1905).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Leicester and Lincoln Bearer Company: Alastair MacGregor to be Lieutenant (dated July 5th, 1905).

THE BIRTHDAY HONOURS.

In the list of birthday honours are the names of Surgeon-General Charles McDonagh Cuffe, C.B., who has been promoted to Knight Commander of the Bath; Surgeon-Major Thomas Egerton Hale, V.C., a survivor of the Crimean War, and Surgeon-General William Launcelot Gubbins, M.V.O., Principal Medical Officer of the Western Command in India, who have been made Companions of the Bath; and Colonel D. Bruce, F.R.S., R.A.M.C., and Lieutenant-Colonel and Honorary Colonel William Coates, R.A.M.C. Volunteers, who have been made Companions of the Bath in the Civil Division.

ROYAL VISIT TO MILLBANK MILITARY HOSPITAL.

On July 1st the King and Queen, accompanied by Princess Victoria, visited Millbank Military Hospital. Among those present to receive their Majesties were Surgeon-General A. H. Keogh, C.B., Director-General of the Army Medical Service; Major-General L. J. Oliphant, C.B., commanding the London District; Colonel A. T. Sloggett, A.M.S., C.M.G., Principal Medical Officer, London District; the Hon. Sidney Holland, and Sir Frederick Treves, C.B., K.C.V.O.

THE SCHOOLBOYS' REVIEW.

As regards the late review in Hyde Park of some 4000 or 5000 public school boys by the Duke of Connaught we may remark that the public had a good opportunity of seeing on that occasion the material which is ready to hand for forming a new line of defence. On both physical and moral grounds we hope that the time will come when it will be compulsory that every boy shall be taught the elements of military drill and shall learn the use of the rifle so as to fit himself to take part, if need be, in the defence of his country.

THE WAR IN THE FAR EAST.

There is no news of any special medical interest from the seat of war. That about the general state of affairs in Russia, and more especially as regards the actual condition of her naval and military forces, if taken in connexion with the recent unprecedented events at Odessa, Sevastopol, and elsewhere, has been so conflicting and liable to undergo such sudden and complete changes almost from day to day that it is impossible to form any accurate picture of the situation. It seems clear, however, that the forces of the Russian Government have been going through a very grave crisis and that, so far as Odessa at any rate is concerned, its inhabitants are only now emerging from a state of panic. It is settled that the Peace Conference is to take place but whether there is to be any armistice beforehand has not been decided. According to the latest accounts, Admiral Rojdestvensky is progressing favourably.

Several Russian medical men now in active service in the

Far East have asked the Minister for War whether those who have already been five years in service in that region may now have the option of returning to European Russia. The answer was in the negative unless such return were necessary for their recovery from wounds or illness, but owing to the undermanning of the medical service in the active army no one who was physically fit could be spared.

Correspondence.

"Audi alteram partem."

THE PRINCIPLES OF HEREDITY.

To the Editors of THE LANCET.

SIRS,—Mr. M. D. Eder's arguments in THE LANCET of June 17th, p. 1675, are somewhat difficult to follow. In his opening paragraph he paraphrases Dr. Archdall Reid and then seems to think he has controverted him. But to paraphrase is not to controvert.

The doctrine of evolution through natural selection is almost universally accepted by scientific men. Until recently it was universally believed that races which have long been exposed to a lethal and prevalent disease are more resistant than races which have been less exposed—for example, negroes as compared to Englishmen in relation to malaria and Englishmen as compared to Polynesians in relation to tuberculosis. It was believed also that South Europeans and Jews are more temperate than North Europeans in regard to alcohol and North Europeans than Red Indians; whereas natives of India, who have long used opium, are more temperate as regards it than Chinamen, who have used it less and who, on the other hand, are more temperate than Burmans, Polynesians, and Australian natives who have only recently made the acquaintance of the drug. Since, however, Dr. Reid attributed this acclimatisation (i.e., evolution) to natural selection Mr. Eder and one or two other gentlemen have discovered that it has no real existence. There is a direct conflict of evidence, but I am inclined to think that most people will believe, for example, that Englishmen are more resistant to tuberculosis than Polynesians, and Italians and Jews more temperate than Englishmen and Red Indians.

Mr. Eder's assumption that malaria has disappeared from England because Englishmen have become quite immune is totally unwarrantable. Dr. Reid clearly shows that no race can become *immune* to any disease to which it is susceptible through natural selection. He has assumed merely that negroes have become more *resistant* than Englishmen because they have suffered more. When Mr. Eder states that plague has been endemic in the East from a remote period does he mean that during this period the mass of the population has been continually exposed to infection? If he does not mean this his objection has no point. As a fact, the literature of the subject proves that plague is peculiarly an epidemic malady.[1] Apparently he disputes the statement that disease when epidemic is more terrible than when endemic. But, to take a couple of examples out of very many, the inhabitants of Great Britain flourished when both small-pox and measles were endemic. But a single epidemic of small-pox swept away 3,500,000 of the comparatively small population of Mexico, and quite recently (1876) more than a quarter of the inhabitants of Fiji perished during an epidemic of measles. In each case practically the whole population was stricken down, the sick were left untended, the business of the community was neglected, and famine followed.

Of course, Dr. Reid does not attempt to prove that the "non-inferiority" of certain races as compared to others is due to the use by the former of alcohol. Such a doctrine would contradict his entire teaching. No one has been so absurd as to suggest that the races which have used alcohol would have risen to the superman of Nietzsche if they had not used it. The principle of parsimony has been thoroughly recognised by students of heredity, but they have recognised also the principle of correlation. Mr. Eder states that Dr. Reid has devoted little "space to the relation of the germ plasm to the environment." The actual truth is that many pages—one might almost say the whole work—are devoted to a consideration of this point. He implies that Dr. Reid advocates the sterilisation of the insane. Dr. Reid does not even hint at it. Both in his actual statements and in his implications Mr. Eder is inexcusably inaccurate throughout.

For myself, I can only say that I have read the work with great profit and pleasure and with entire conviction. It contains new matter and is original to a very unusual degree; it is lucidly, vividly, and interestingly written; it is the most considerable work on the subject that has appeared in the English-speaking world and the most comprehensive that has been published anywhere. It is not too much to say that no student of heredity, medicine, or sociology can afford to neglect it.—I am, Sirs, yours faithfully,

June 19th, 1905. D. WAUDBY.

[1] See, for example, Hirsch's Handbook of Geographical and Historical Pathology, vol. i., pp. 494–544

To the Editors of THE LANCET.

SIRS,—Without any burning desire to confer a valuable service on science and humanity I willingly accede to Dr. Archdall Reid's request to amplify, so far as I can, my account of an epidemic of beri-beri in South America. The incident to which I referred took place at Puerto Alonzo, on the River Acre, a tributary of the Purus, in the year 1902–03. Puerto Alonzo is situated about 11° S. and 73° W. (I am writing without my papers and books to refer to). As to the number of Europeans who lived there and the number attacked I can speak positively because I saw them all, including the one who was still ill when I arrived (a Boer). I cannot furnish the exact numbers of the garrison nor of those attacked because I only reached the place towards the end of the siege; the returns were not my property and many of the papers were lost under the difficult conditions we were in. There is no exaggeration in the figures I give; the garrison was over 350 and more than 100 died from beri-beri. These figures were based on personal communication of the commanding officer and others to myself and on information I had from those who attended the sick. I must point out, however, that my observation was a particular one; having seen beri-beri in Europeans I could hardly have stated that it does not occur in Europeans. Dr. Reid writes that if my observation be correct there must be something in the waters of the Upper Amazon to account for the relative immunity of Europeans. Surely this is hardly one of those uses of the imagination in science which Tyndall advocated. Hypotheses by the score pass through the mind but I should think only those deserve publication that can be more or less readily verified by experiment.

Having had special opportunities of studying disease among the Jews during the last two years I repeat that this race within the limits of my observation suffers from alcohol pathologically like other races and that they are not moderate drinkers. To controvert my criticism of Dr. Reid's views on malarial immunity with a series of suppositions but strengthens my argument. It is asked why I suggested that there is no evidence to show that the malaria parasite which once flourished here was different from that in existence elsewhere. I suggested it precisely to meet by anticipation the views of those with whom conjectures pass for facts. I failed in my object. My experience of the South American people is to some extent confirmed in the very number in which you printed my letter. "Intemperance is general amongst the working-classes," observes the British Vice-Consul at Oruro, Bolivia.[1]

Please, Dr. Campbell, I did not repudiate the principle of natural selection. I should not be so impertinent. But really to-day the expression is quite devoid of meaning, seeing that it has so many. If Dr. Campbell tells me what he understands by the principle I shall be glad to repudiate his view, the editors' patience and my time permitting. Statistical evidence is alone in favour of the hereditary nature of tuberculosis; the affirmative view of so many great clinicians is of the same nature—i.e., so many cases where successive generations have suffered that no further evidence appears to them necessary. But if one can find a dozen (or even one) assured cases of tuberculosis without any evidence of the disease in the preceding generations all the so-called inherited cases can be explained by infection. The predisposition of man to tubercle, to the tænia solium, and certain other parasites is racial, just as other animals have their particular parasite. The explanation of parasitism is now undergoing solution. The current text-books of pathology give no support to the view of the inherited nature of tuberculosis.

[1] THE LANCET, June 17th, p. 1676.

I deprecated legislation or medical interference—e.g., sterilisation—based on the view that insanity is inherited. For the present I will not respond to Dr. Campbell's challenge and decline to say whether I consider any forms of insanity are inherited. One of my purposes in criticising Dr. Reid's work was that I believed he had built up an elaborate structure on a few incorrect observations and imperfect deductions. I think it illegitimate for scientists to warn legislators against, e.g., interfering with the licensing laws on such insufficient evidence.

Dr. Karl Pearson, in his interesting essay on Education prefaced to the "Encyclopædia Britannica," states that during the course of his investigations he received many foolish suggestions from all sources, but that the most unscientific and absurd came from medical men. This reproach will not be removed so long as we hold to formula instead of to facts, to loose expressions that sound well and mean nothing. A thrombus occurs in the jugular vein as part of a pathological condition; the reporter must needs remark: "The blocking of the venous channel was nature's effort to localise the inflammatory process." As well say the diseased patient was nature's effort to maintain the doctor. The College of Physicians might find employment for several censors confining themselves solely to medical literature.

I am, Sirs, yours faithfully,

June 23th, 1905. M. D. EDER.

MEDICINE, ITS PRACTICE AND ITS PUBLIC RELATIONS.

To the Editors of THE LANCET.

SIRS,—I have read with considerable interest the various articles on "Medicine, its Practice and its Public Relations," which have appeared in your columns since February last and would like to make a few comments on the report of the present state of medical education. It seems to me this fifth year of the curriculum has been a "sore spot" ever since it was added, and the intention of the General Medical Council in lengthening the course from four to five years was undoubtedly that of enabling the student to devote his final year more entirely to clinical work. Why has this wise intention been frustrated? I think it is generally admitted that a serious waste of time occurs during the first year in taking the elementary subjects of chemistry, physics, and biology, whilst later the student also becomes hampered with the additional items which gradually continue to increase in number.

Now it occurs to me that the broad lines of reform necessary are these: (1) the subjects of chemistry, physics, and biology should be passed previously to commencing the curriculum; (2) the whole course of lectures and hospital appointments, including attendance on vaccination, fevers, ophthalmology, &c., should be completed in four years, including examinations, leaving only that of medicine and surgery to be accomplished at the end of the fifth year; and (3) the final year, or, at any rate, six or eight months of it, should be spent in compulsory pupilage to a registered general practitioner.

This latter suggestion may appear odd, but I have formed the opinion, and am confident of many who support it, that herein lies a problem of the utmost importance to the student, the profession, and the public. Undoubtedly the hospital system is a great advance on the old apprenticeship days, but we run the risk of serious error in excluding *altogether* this experience of general practice which formerly obtained. I have heard the statement repeatedly made by men, six months after qualifying and taking an assistancy, how much they regretted not having had the same period in actual practice prior to passing their final examination. Under existing conditions a man may even possess his diploma or degree without ever having been brought into contact with such a common malady as measles, and of course the knowledge of the management and routine of practice, to say nothing about the all-important factor of tact and judgment in dealing with the various phases of humanity, these things are a complete blank to him. And yet these are the men who when qualified seek assistantships in general practice and demand the usual salaries. They then discover that they have to learn to apply their knowledge in very different ways to those which were enjoyed in hospital life, surrounded by nurses and appliances ready to hand at any moment, and it is then only the man with skill and resourcefulness under awkward conditions who can hope to be successful.

It would be interesting to hear an expression of opinion from your readers on this matter. My point is that the curriculum of five years should result in a complete equipment of the student to manage at any rate a general practice and resting *exclusively* on the hospital training. I ask, Is it so?

I am, Sirs, yours faithfully,

Horbury, near Wakefield, June 27th, 1905. WALTER ASTEN.

THE TREATMENT OF RINGWORM OF THE SCALP BY THE X RAYS.

To the Editors of THE LANCET.

SIRS,—In reply to the letter of Mr. Winwood Smith in THE LANCET of July 1st, p. 49, I would say that, so far as the scalp in childhood is concerned, I have found practically no difference in the susceptibility of different individuals since I have been able accurately to measure the dosage by means of Sabouraud's pastilles. That there is, however, a difference in the susceptibility of different regions in the same individual there can, I think, be no doubt, and I should hesitate to apply to the face more than half the maximum dose for the scalp. It is said, too, that the largest dose which the skin can absorb without risk to its integrity is greater in the case of old people than in the middle-aged and greater in adults than in children. But upon this point I do not feel competent to give an opinion. Certainly an inflamed surface is much less tolerant than a normal skin and should receive a smaller dose.

I would explain the occurrence of radio-dermatitis in the cases mentioned by Mr. Smith by the supposition that, in spite of the apparently similar conditions, the output or the quality of the x rays was not the same in each instance; the same tube may emit a different amount and quality of rays during two equal and consecutive periods of time, although the primary current remains the same, for the tube may become heated by the passage of the current and so lowered in vacuum, thus allowing a greater amount of current to pass through it. Other points to be taken into consideration are: (1) the distance of the surface exposed from the anti-cathode of the tube, since with the same quality and quantity of rays coming from the tube the therapeutic activity varies inversely with the square of the distance; and (2) the interval of time between consecutive exposures, since if a second exposure takes place before the action of the first has passed off there will, of course, be acumulative effect. I have no doubt that in the examples given by Mr. Smith the unequal results were due to the impossibility at present of insuring accurate dosage except by measurement of the rays as they leave the tube, which, so far as I know, can only be made by means of the pastilles of Holzknecht or of Sabouraud. The pastilles of Sabouraud and Noiré may be obtained from the maker, M. L. Drault, 57, Boulevard Montparnasse (VI^e^ Arrt.), Paris, or from Mr. Schall, New Cavendish-street, London, W.

I am, Sirs, yours faithfully,

Weymouth-street, W., July 1st, 1905. H. G. ADAMSON.

VINCENT'S ANGINA AND THE BACILLUS FUSIFORMIS.

To the Editors of THE LANCET.

SIRS,—In reference to the article on the above subject, which appeared in THE LANCET of May 13th, p. 1260, by Professor H. Vincent, the following case may be of interest. A native cavalry soldier came under my care last year for ulceration of the gums and loosening of the teeth. On the right side of the lower jaw the gum was swollen, pulpy, and tender, and was perforated in five or six places on the outer aspect. The first and second molars and both bicuspids were quite loose and might have been removed with the finger and the thumb. On pressure a considerable amount of fœtid pus welled up around the teeth and oozed out of the perforations referred to. The condition had only existed for a week or so and the chief complaint was the difficulty in masticating, the disagreeable taste in the mouth, and slight fever. The case was looked upon as one of Riggs's disease—pyorrhœa alveolaris—and treated energetically by local antiseptic applications and douching. A smear of the pus was taken and laid aside; the circulating blood was examined

for malarial parasites with a negative result. About ten days afterwards and when the patient had recovered I had occasion to examine the smears of pus and was surprised to find a very unusual condition. One slide was stained by Leishman's method and one with methylene blue. The following organisms were present: (1) spirilla in very large numbers; (2) a short curved organism; (3) a diphtheroid short bacillus in masses; and (4) a long, curved, ribbon-shaped organism in small numbers.

To describe these in more detail: 1. The spirilla were very numerous and in some places matted so that as the organisms were frayed out from a common centre a "cat o' nine tails" appearance resulted. In size they varied from an average 14–18μ to extremes of 40μ and 10μ. The breadth was generally 1–2μ but certain individuals presented a thin ribbon-like form. There were two, three, or four curves in each spirillum. The continuity of some, especially the broader forms, was interrupted by a glancing spot or a definite chromatin-like body. Sometimes where many spirilla were collected several free, red (Leishman stain) round bodies were seen. I did not see any spirilla phagocytosed. 2. The short sickle-shaped body was generally about 7 or 8μ long by 2μ broad. The ends were rounded and the staining was not homogeneous. Almost invariably on careful focussing under a magnification of 1800 diameters chromatin-like particles could be made out and were sometimes visible as obvious red spore, or nuclear-like bodies. In the methylene-blue preparation some of these sickle bodies stained homogeneously, but in some evidence of division into a bacillary form was noted. 3. The diphtheroid bacillus was evidently quite independent of the other elements. In their arrangement these bacilli suggested the Klebs-Löffler bacilli in that they tended to lie in rows, squads, and palisades, but the resemblance stopped there. They were shorter and stained unevenly, so that in many cases it was just a question whether they were not diplo-bacilli. They showed marked metachromatism, or, at least, red particles, dots, and round bodies were seen lying in their protoplasm. They were nearly always aggregated into masses and were sometimes phagocytosed. 4. There were certain bodies, few in number, which looked like narrow curved ribbons. They were about as long as a spirillum but without indulations. They showed no trace of segmentation but, nevertheless, showed four or five well-marked blood-red rounded bodies lying at intervals in the pale blue protoplasm. Their size and general shape strongly suggested some relationship to the spirilla and especially to the broader forms mentioned under heading 1. They may have been spore-bearing bacilli but spores are not stained red by Leishman's stain after ten minutes' application. I do not know the relationship between metachromatism and the special phenomenon seen where nuclear matter reacts to Romanowsky's stain, but I feel sure that the appearance here noted is due to one or other of these causes.

It is interesting to note that the fusiform bacillus described and figured by Professor Vincent in the article above mentioned was not met with. The sickle-shaped body I describe could not have been identical, though it is possible it may have been an involution or degenerate form. In Dr. H. W. Bruce's article on this subject[1] I see, however, that he writes: "Shorter forms are seen (6–8 μ) occasionally curved and comma shaped. Very long badly staining bacilli are also sometimes present, and now and then a bacillus is seen which is greatly swollen in its centre, the expanded part not taking up the stain, whilst its edges are defined by a thin dark line." I think probably he is referring to the bodies which I have described under headings 2 and 4. In the descriptions of these two writers the fusiform bacillus was present in large numbers and the spirilla were looked upon as of less importance but in my case the spirilla were in enormous number and the other forms were few and far between. In my case, also, the pus was contaminated by the ordinary buccal organisms. In THE LANCET of July 9th, 1904, p. 73, there is a note by my late teacher, Dr. A. E. Wright, on this subject in a short article called "Pathological Suggestions." I fully agree with him when he suggests that the fusiform bacillus is a stage in the life-history of a trypanosome. I believe that the spirillum itself, the fusiform bacillus, the sickle-shaped body, and the ribbon-like body I have described will all turn out to be different stages in the life of one parasite.

[1] THE LANCET, July 16th, 1904, p. 135.

From the description of the fusiform bacillus in Professor Vincent's and in Dr. Bruce's paper it does not suggest the appearance of a true bacillus. Its length (as Dr. Wright points out) is against that; its vacuolation, which Professor Vincent lays stress on, and above all its behaviour to Romanowsky's stain, are highly suggestive of a protozoic origin. By this method chromatin in its densest form stains a brilliant blood red and so aggregations of nuclear material if young and active and the special chromatin structures in protozoa like the centrosome are always stained red. The spore bodies of protozoa, as those of bacilli, are both alike in being formed of highly concentrated nuclear material but are unlike in this respect that the bacillary spore is surrounded by a dense capsule which serves to protect it under its many vicissitudes in the ground or water but the spore body of animal parasites needs no such protection as its further stage is to be carried out in the body of another host. So the bacillary spore needs special staining methods to reveal it. If this is true, then, these red bodies in the protoplasm of the bacillus fusiformis cannot be spores of a bacillus and they are probably chromatin aggregations in the body of a trypanosome-like organism.

I have lately been carrying out some observations (as yet incomplete) on the changes undergone in trypanosomes under adverse conditions. The trypanosomes in the blood of an amphibious tortoise were watched in their course down the alimentary canal of a leech which had been allowed to suck the tortoise's blood. I found that the undulatory membrane and flagella at once disappear, that the body of the animal becomes longer, thinner, and more ribbon-shaped or else it becomes comma or crescentic shaped and seems to become quiescent and unaffected by the digestive fluids of the leech. The protoplasm becomes granular, the granules stain a blood-red by Romanowsky's method, and in the last stage I have yet seen three or four bright red spore-like bodies remain in the pale degenerate body of the trypanosome. I mention this because, comparing it with the forms seen in the pus from the case of pyorrhœa alveolaris, the resemblance is very suggestive. I regret that I was unable to make culture or inoculation experiments but the materials were not available and, moreover, until the appearance of Dr. Wright's paper the possibilities of the subject had not struck me. Dr. Wright calls attention to the occurrence of extreme anæmia with some cases of pyorrhœa alveolaris. This adds an additional interest and importance to the subject and looking further to Dr. W. Hunter's views on oral sepsis and pernicious anæmia it raises questions and possibilities which I have not the temerity to suggest.

I am, Sirs, yours faithfully,

F. PERCIVAL MACKIE, F.R.C.S. Eng.,
Lieutenant, I.M.S.

Goona, Central India.

TETANUS AND CHLORAL HYDRATE.

To the Editors of THE LANCET.

SIRS,—I should like to express my thanks to Dr. J. M. Fortescue-Brickdale for the information given in his kindly letter in THE LANCET of May 20th concerning the results obtained by French physicians in the treatment of tetanus with large hypodermic doses of chloral hydrate. The facts there stated clearly demonstrate the danger of overdosing tetanic patients with chloral hydrate but do not, I think, prove anything further. I quite realised this danger at the time of writing the article published in THE LANCET of May 6th, and it was for this reason that I suggested "the advisability of commencing the treatment of an adult case of tetanus by doses of about 30 or 40 grains of chloral hydrate and steadily increasing this to a drachm or more until the desired effect was produced, repeating the dose when the spasms recurred, and gradually reducing the quantity as the spasms became less violent in character." If this method of administering the drug were tried the danger of overdosing would be reduced to a minimum. In the cases quoted by Dr. Fortescue-Brickdale, very large doses of chloral hydrate were administered either intravenously or subcutaneously and deep anæsthesia was produced with fatal results in many cases; these cases are consequently not quite on a par with the case I published, in which the drug was administered per os and per anum and only a very slight degree of anæsthesia was produced. The proposition I am anxious to see proved or disproved is that the poisons of tetanus and chloral hydrate

are antidotal. In the early days of administering mercury in the treatment of syphilis, overdoses of the drug possibly accounted for nearly as many deaths as the disease itself. To-day we are wiser; our faith in the antidotal power of mercury is, however, an established fact. If we can establish a like relation between chloral hydrate and tetanus another useful weapon will be added to our equipment.

I am, Sirs yours faithfully,

JOHN MABERLY, M.R.C.S. Eng., L.R.C.P. Lond.

Woodstock, Cape Colony, June 12th, 1905.

PROLONGED ANÆSTHESIA BY CHLORIDE OF ETHYL IN OPERATIONS ON THE NOSE AND THROAT.

To the Editors of THE LANCET.

SIRS,—I have for some time past been working out a method of maintaining anæsthesia in short operations on the nose and throat by means of the vapour of ethyl chloride administered through a tube. By short operations I mean those lasting a little longer than two minutes which is about the limit of available anæsthesia after an ordinary dose of ethyl chloride administered in the usual way. Last winter I brought the results of my first 20 cases before the Society of Anæsthetists. I have now completed nearly 100 cases by the method which I am about to describe with almost universal success, the partial failures I have had being in subjects, not infrequently met with, who do not take ethyl chloride well in any circumstances. My experience has been that where anæsthesia is easily induced by the ordinary method it is easily maintained by means of my apparatus and *vice versâ*.

In order to have a good supply of vapour it was necessary to have a fair bulk of ethyl chloride put up in a suitable chamber, absolutely gas tight, with a suitable tap for the delivery of the vapour through a tube to the patient's mouth or nose. Mr. Paxton, of 93, Dyer's Hall-road, Leytonstone, has made me some in various patterns and sizes and assisted me with much valuable advice as to details. The one which I have finally adopted is a metallic cylinder, holding about 250 grammes, with a screw-down stopper on top which on being partially unscrewed admits the vapour to a tap on its side, whence it passes along a tube to a suitable gag; I use either a Probyn-Williams or a Wingrave with a short metal tube fixed at right angles to the upper blade. The gag must *always* be inserted before commencing this anæsthetic, otherwise there will be difficulty in opening the jaw. Having done this five cubic centimetres of ethyl chloride are administered in the usual way with the ordinary closed apparatus. I generally allow from one to two minutes for the induction getting the patient deeply under, the length of time depending very much on the age and strength of the individual. As soon as the mask is removed the operation commences and I turn on the taps and a little vapour passes down the tube. This would very soon stop owing to the rapid cooling produced by evaporation, but I have at hand a porringer of hot water in which I put the chamber from time to time causing a rapid ebullition. I economise vapour by pinching the tube during expiration with the hand that steadies the gag, and at times for several breaths the tap is turned off altogether lest the anæsthesia get too deep. I generally aim at having a slight corneal reflex, a moderate pupil, and deep regular, but not stertorous, breathing. In this way I have maintained a good anæsthesia in cases lasting from three to 20 minutes at an average expenditure of less than five cubic centimetres of ethyl chloride per minute of available anæsthesia. Except for some special reason I should not advocate the use of this method in operations lasting over ten minutes on account of the expense. In considering the advantages one has to compare with other methods. The only two I know of are gas through a tube or chloroform in a Junker. Of the former I have no practical experience but I am inclined to think that the results would be less certain. The cost would certainly be greater and the weight of cylinders to be carried about is a disadvantage. My ethyl chloride cylinder takes up but little room and when full only weighs 21½ ounces, the contents being sufficient for 50 minutes' anæsthesia or, say, ten cases of five minutes each.

The advantages of this method over chloroform are: (1) Rapidity—a short operation can be finished in less time than it takes to get the patient under chloroform; (2) safety—especially in the sitting position; (3) slighter after-effects; and (4) greater freedom for the anæsthetist to assist, no hand being required to work a bellows. There are many minor details into which I might enter but I fear I have already trespassed too far on your space. I will only add one word of warning in conclusion. The ethyl chloride used in charging should be guaranteed made from pure alcohol and free from impurities, otherwise the taps would soon become corroded and ruined. I speak from experience.

I am, Sirs, yours faithfully,

G. A. H. BARTON,

Westbourne-park-road, W. Anæsthetist to Throat Hospital, &c.

LUNACY ACTS AMENDMENT BILL (LONDON) (NO. 2).

To the Editors of THE LANCET.

SIRS,—Since the writing of your very able and exhaustive leading article this Bill has been dropped. You have dealt so completely with the subject that there is very little to add.

That very good work is being done by the metropolitan infirmaries is evidenced by the fact that in 1904 out of a total of 7654 admissions of "alleged lunatics" only 3716 were sent to asylums and 3155 were discharged cured within the period of 14 days, which represents the limit of legal detention in an infirmary or workhouse, and if this period of detention could be extended for another 14 or 28 days a sensible addition would be made to the list of cures. To your formidable array of objections may I point out the hardship which would be inflicted upon the friends of the patient, caused by the necessity for their attendance at the receiving house which must in many cases be some miles from their homes and also that a check upon abuse of enormous value would be abolished. The proposal of the London County Council revolutionised the intention of all previous lunacy legislation which has hitherto regarded it as an essential point that the authority which primarily receives and certifies the cases should not be the same body which has the power of indefinite detention.

Most boards of guardians have during recent years recognised their responsibility and have at considerable expense erected efficient mental wards and are naturally very wroth that their constituents should be called upon to pay an extravagant sum for the realisation of an idea. The party whip has, however, been very vigorously cracked over this matter and many otherwise level-headed administrators have been compelled to "toe the line" sorely against their convictions. The knowledge that we have your support will materially strengthen the position of those who have consistently opposed this proposition since its inception in 1897. I inclose a copy of the report upon this matter, adopted at a recent conference of the medical officers of metropolitan infirmaries and workhouses, called specially to consider this scheme and which unanimously condemned it.

I am, Sirs, yours faithfully,

F. S. TOOGOOD, M.D. Lond.,

Honorary Secretary to the Conference of Metropolitan Poor-law Medical Officers.

Lewisham Infirmary, July 3rd, 1905.

THE RECENT OUTBREAK OF TYPHOID FEVER AT LINCOLN.

To the Editors of THE LANCET.

SIRS,—After the appearance in THE LANCET of July 1st, p. 22, of a "Note on the Recent Outbreak of Typhoid Fever at Lincoln" by Mr. E. Cecil Clements the following additional observations relating to the same outbreak may be of interest. They are based on 138 cases of typhoid fever which occurred in the practice of my friend, Dr. Andrew Burgess of Lincoln, whom I was assisting at the time. In almost every case the skin of the palms of the hands and the soles of the feet was of an intense yellow colour, deepest on the thicker parts of the skin. In some of the severer cases the colouration extended to the skin on the tops of the toes. The hands were affected first—generally at the end of the second week—and the feet soon after. The coloured epithelium next cracked and peeled off in big flakes. One girl shed an abundant crop of warts. The hands were the first to resume their normal appearance. In some cases the skin on the soles of the feet was yellow and peeling freely two months

after the onset of the fever. A few patients complained of burning pains in the soles of their feet. The peculiar green stools mentioned by Professor J. Dreschfeld in Allbutt's "System of Medicine" were noticed towards the end of a relapse in two cases. Hæmaturia was noticed in two cases and nephritis with retention of urine and œdema of the face in one case. A case of the apyrexial form of typhoid fever was met with in a boy aged ten years. His temperature was normal throughout with the exception of a single rise on one occasion to 101·6° F. and his pulse was slow—from 56 to 60 per minute. All the other symptoms associated with typhoid fever were present.

Towards the end of the outbreak measles was very prevalent and three cases were seen where typhoid fever and measles were running concurrently. The first case was that of a boy, aged five years, who had a typhoid rash on Feb. 24th and a measles rash on the 26th. He also had hæmorrhage from the bowel on March 3rd and 4th. The second case was a boy, aged six years, who had a typhoid rash on March 19th and a measles rash on the 26th. The third case was a boy, aged six years, who had been troubled with a tapeworm for three and a half years. The typhoid rash appeared on Feb. 17th and on March 21st the measles rash came out. He had troublesome diarrhœa, passed blood on many occasions, and now and them parted with segments of the tapeworm. Two other children in the same house were down with measles at the same time. The symptoms of both diseases were not modified in any way in any of the cases.

I am, Sirs, yours faithfully,

J. F. HODGSON,
Assistant Medical Officer of Health, Halifax.

July 3rd, 1905.

HYDROCHLORIC ACID IN THE GASTRIC CONTENTS AND CANCER.

To the Editors of THE LANCET.

SIRS,—The paper read by Professor B. Moore at the Royal Society and published in THE LANCET of April 29th, p. 1120, on the absence or marked diminution of free hydrochloric acid in the gastric secretion in cases of cancer other than gastric seemed to offer an easy method for solving the difficulty of diagnosing between malignant and benignant new formations. I have recently had opportunity of testing the gastric contents in eight cases of cancer where implication of the stomach could be excluded. In four there was absence of free hydrochloric acid in the fluid drawn off from the stomach after a test meal. In the other four there was a very marked positive reaction. All the eight cases have been examined microscopically. I was rather disappointed at this result as I had hoped that at last an easy method for distinguishing between innocent and malignant growths had been devised. This, however, does not appear to be the case, for although the test (i.e., phloroglucin and vanillin) was applied only qualitatively, yet it is sufficiently sensitive to allow the observer to obtain a fair estimate of the quantity of free acid present. To apply it quantitatively is at present outside the region of ordinary practical clinics. All the eight patients were treated alike but the fluid drawn off was very dissimilar and the difference in quality may possibly afford a clue to the discrepancy in the results, for in those without acid it was watery and had almost no solid, while in those which gave a marked reaction it was semi-fluid and contained much solid matter.

I am, Sirs, yours faithfully,

Westminster Hospital, S.W., July 3rd, 1905. R. G. HEBB.

RUSSIA'S SECOND CONGRESS ON PSYCHIATRICS: 18 YEARS' INTERVAL.—The Second Congress of Russian Psychiatrists will be held in Kieff from Sept. 17th to 24th next. One of the psychiatric societies had expressed the opinion to the organising committee that in view of the difficult situation in which Russia finds herself just now the holding of the congress seemed inopportune. The organising committee nevertheless explained the extreme necessity and urgency, as to time, of the congress, the chief cause being "the imperative call for attention by the unfortunate psychiatric patients in the hospitals, the last congress on the subject having taken place 18 years ago. Besides which it was necessary to think of, and to consult on, those new highly complicated cases resulting from the present serious war and the tension undergone by the people in the great upturn in their social life." The report, says the *Novoe Vremya*, will be printed at the public cost.

DAVOS-PLATZ.

LAWS AND REGULATIONS IN REGARD TO TUBERCULOUS PATIENTS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

I.

DAVOS-PLATZ is so well known as a station for the treatment of pulmonary tuberculosis that it is not necessary to attempt a general description of the place or a recapitulation of its history. Suffice it to say that Davos is a valley which, though situated at 5350 feet above the sea, is nevertheless surrounded by high mountain scenery, some of the mountains in the immediate neighbourhood reaching an altitude of more than 10,000 feet. The result of this situation is an average temperature similar to that of St. Petersburg—namely, 36·5° F. From the middle of November till the end of April the place is deeply covered with snow, but, on the other hand, there are powerful sunshine, clear, pure, strong light, reduced atmospheric pressure, no fog, few clouds, very little moisture or rain, and shelter from the colder winds. It was not, however, till 1865 that two invalids suffering from pulmonary tuberculosis ventured to pass the winter there. The result was so favourable that others followed their example and thus the sparsely inhabited mountain valley became the present fashionable winter station. The influx of visitors increased so rapidly that the simple peasants who lived in these mountains did not know what to do with all these strangers. Davos-Platz was but an official centre where the church, the municipal building or Rathhaus, the post-office, and a few houses clustered together. Most of the natives live in wooden cottages built in the midst of their fields and dotted about over the vast commune. This is one of the reasons why the statistics in regard to the immunity from infection among the natives are of but little importance. It has been said that if tuberculosis is infectious then there would be an increase in the number of cases among the native population. A considerable effort has been made to obtain statistical information on this point and such observations might be of universal interest. The statistics obtained are not, however, absolutely trustworthy. There has been no attempt to manipulate the figures. What has been done has been honestly done. But in these sparsely populated mountainous districts skilled medical attendance is not easy to obtain and sometimes the only evidence as to the cause of death was that given by friends or relatives. Nevertheless, it is fairly evident that the native population has not been infected by the advent of an enormous number of visitors. The death-rate from tuberculosis among the natives has been below 1 per 1000 per annum. On the other hand, the statistics are based on the number of inhabitants of the whole commune which includes not only Davos-Platz and Davos-Dorf but many miles of surrounding pasture land and mountain. During the 25 years 1876 to 1900 the average native population numbered 1315 and among them there were in that time 36 or 38 deaths from tuberculosis according to whether two doubtful cases are included or not. This is equal to an annual death-rate from tuberculosis of 0·91 or 0·97 per 1000. Only 4·64, or 4·94, per cent. of the total deaths were due to tuberculosis. On the other hand, another set of statistics gives the numbers showing the immense increase of population and of visitors. These amounted to 6830 in 1886, to 10,167 in 1890, and to 15,800 in 1900. In addition to this and in accordance with the census of Dec. 31st, 1900, there were in the commune of Davos 1387 burgesses—that is, peasant proprietors or natives; 3086 other Swiss inhabitants, and 3861 foreigners who had settled in the town. Of these there were 266 Swiss and 2262 foreigners notified as having taken up their residence in the commune for at least three months and probably for a longer time. All who did not remain three months at Davos were counted among the 15,800 visitors.

The problem presented by Davos is that of a valley high up in the mountains with a sparse and scattered native population suddenly invaded by a large number of patients, a smaller number of pleasure-seekers, and then again a large number of hotel-keepers and their servants, of shopkeepers and their assistants. The sturdy peasants of Davos might

have known what to do to resist a hostile attack from over the Austrian border which is not far away; but this fashionable invasion of friendly people willing to disburse what seemed fabulous sums of money for luxuries unknown among these hardy mountaineers, that was a contingency for which they were in no wise prepared. In vain these peasants came down from their mountains, gathered together in their antique Rathhaus and debated as to what had best be done. The facts of the case grew altogether beyond the experience of their oldest and wisest municipal councillors. So the newcomers, the strangers who had arrived to settle and to trade in the new winter station, took the matter in their own hands. In August, 1871, they constituted a committee for the embellishment of the station. In four years this developed into the Curverein which is practically the local administrative body. On the ground that this committee was organising facilities for the treatment "cure" and for the enjoyment of the visitors it levied a tax of 2½*d*. per day or £1 per annum on visitors. Then it has undertaken various public works such as the water-supply, the drainage, the building of roads, the providing of seats on mountain paths, and vast installations for the sports—the skating, the toboggan races, &c.—that attract so many people other than patients.

In all this there were not only the ordinary public health considerations that arise in all towns but the special risks resulting from the fact that the majority of people who visit Davos-Platz are suffering from tuberculosis. At first, of course, nothing was done; but as the infectious nature of tuberculosis became better known the necessity of taking measures to minimise the danger also became more and more obvious. Disinfection and the prevention of expectoration in public were the two most urgent special measures needed. Nevertheless they were opposed at first even by some of the local practitioners. Now, however, the existing new laws and regulations may be considered as quite in harmony with what is generally conceived to be desirable in such circumstances. What then has experience proved to be necessary in a great centre for the treatment of tuberculosis? This is a matter of practical importance and worth while examining in detail. Considering the large number of invalids and the importance of rest to these sufferers, it was obvious that at night there must be no noise. Therefore there is a series of by-laws against noisy games, such as skittles, *morra*, and against innkeepers or others who allow noisy assemblages or games on their premises at night. Of course, exceptions are made for certain fête days, for weddings, &c.; still, and, as a rule, not a sound is to be heard at night and this is undoubtedly a great advantage for the patients. The hawking of goods in the streets is forbidden as also are the bringing and the sale of cattle in the town, and every driver who uselessly cracks his whip is fined 4*s*. All the fines paid for breaking any of these rules go to the funds of the Curverein.

Having thus taken measures to prevent the patients being disturbed by unpleasant noises the next thing was to see that they are not inconvenienced by unwholesome odours. All cesspits or other receptacles for stagnant and foul waters are forbidden. They must be drained directly into the sewers. No deposit of refuse, such as rags, is allowed within 100 feet of a house or a public road. No accumulation of stable manure except in a closed receptacle is sanctioned within the town, nor is it allowed to beat carpets or bedding in the public streets. All private yards must be kept scrupulously clean and no one is permitted to burn refuse or any object that may cause smoke or an unpleasant odour. Coming to the question of disinfection this is a matter of such importance in all countries and on which so much doubt still prevails that it may be useful to give the actual text of the law:—

Considering the Federal Law of July 2nd, 1886, on epidemics which endanger public health; considering the cantonal regulations enacted for the execution of this law; the following measures will be enforced at the station of Davos on and after June 1st, 1901:—

Article 1.—All rooms occupied by tuberculous persons, as also all objects contained therein, such as beds, clothes, linen, bedding, &c., must be thoroughly cleaned and disinfected before they are used by other persons.

Article 2.—The disinfection shall be carried out according to the rules drawn up by the Curverein and by the association of the medical men of Davos and approved by the municipality. The disinfection shall be performed by the agents of the Curverein.

Those establishments which possess capable employés may themselves proceed to disinfect with the apparatus and the substances supplied to them by the Curverein and under the surveillance of agents appointed for that purpose by the Curverein.

Article 3.—Persons who let rooms must inform the Curverein within 24 hours when a patient leaves. All such rooms must be disinfected unless a medical practitioner gives a written dispensation. Such disinfection need not be applied in the case of rooms occupied by ordinary travellers and commercial travellers.

Article 4.—All patients suffering from chest disease are under the obligation of carrying on their person a pocket spittoon. They are forbidden to expectorate on the floor. The spittoons must be of porcelain, of hardware, of glass, or of an enamelled metal. They must be cleaned every day and should contain only water or an aqueous solution.

Article 5.—It is not admissible that persons suffering from chest diseases should expectorate on the causeway, the road, paths, &c.

Article 6.—Persons who are found by a medical practitioner to be suffering from a contagious disease other than tuberculosis and enumerated by the law on public health, shall be taken to the isolation house, unless the district medical officer shall declare this is not necessary.

Article 7.—The prescriptions of the Swiss Federal law of July 2nd, 1886, and the cantonal rules for the execution of this law, and the instructions given by the medical officer of the district apply to the disinfection of the rooms, beds, clothes, linen, bedding, and to the means of transport employed by the patients as enumerated in Article 6. The Curverein carries out this disinfection.

The following article (No. 8) at first stipulated that any contravention of the above might be punished by a fine not exceeding £3. But Article 5 was omitted. Now this is no longer the case and any patient who expectorates in the street is liable to be fined £2. It will be noticed that at first it was said that it was "not admissible" that a tuberculous patient should expectorate on the ground. This was the period of moral suasion, and then, as public opinion became educated to the point, the public authorities ventured by a by-law of December, 1904, to include Article 5 with the other clauses and now its infraction entails a fine of from 2 to 50 francs. On this subject I ventured to ask the director of the Curverein what he would do if he saw anyone expectorate in the street. The reply was that he would go up and ask the delinquent for his name and address. If he proved to be a stranger and expressed his ignorance of the law and his regret a few words of warning would be considered sufficient. But if it was an old offender or he refused his name and address then, the director said, he would follow him till he met a policeman and then he would give him in charge.

In regard to disinfection, the rule is that all rooms let out must bear a number. Thus visitors are registered on arrival, with the number of their rooms. When they leave the authorities are informed of the number of the room that has been vacated. By telephone with the Curverein an appointment is at once made and the hour for the disinfect on is settled. At that time an inspector, who is selected by the Curverein and whose position is legally confirmed by the municipality, presents himself. This functionary alone has the right to close the room and to reopen it. No one has the right to enter the room during the process of disinfection. When but one room is disinfected the charge made by the Curverein is 7 francs (5*s*. 7*d*.) but if it is a suite of rooms then the charge is 4*s*. per room. Trioxymethylene is evaporated on a spirit lamp and the process requires about seven hours. All hotel keepers and lodging-house keepers or the managers of sanatoriums have to notify the Curverein not only when a patient leaves but even if he merely changes from one room to another within the same hotel or building. In that case the room formerly occupied has to be disinfected. At the end of the year the cost of the numerous disinfections which have been carried out is submitted to the municipality, together with the receipts, and then the municipality decides whether the charges are sufficient or insufficient; in a word, whether any alteration in the tariff is necessary. From this it will be seen that not only is it illegal to allow a healthy person to sleep in a room which has been previously occupied by a tuberculous patient but even patients who are themselves tuberculous must not sleep in a room where the previous occupant suffered from the same disease. In every case the room must first be disinfected. So that really a traveller or visitor is safer at Davos-Platz than he would be in London, Paris, and most other towns where no such precautions are enforced. Then there are also hotels and boarding-houses at Davos-Platz and Davos-Dorf which make it a point not to accept invalids as lodgers. If any patient accidentally gains admittance he is at once sent away and his room is disinfected. Consequently a traveller would incur less risk at Davos, where the majority of the visitors are patients but where every precaution is taken, than in an ordinary town where there are comparatively few cases of tuberculosis but where no precautions whatever are enforced. It may also be noted that private slaughter-houses are abolished and that no meat can be sold at Davos which does not bear the stamp of the

meat inspectors who are on duty at the public slaughter-house. The trade in milk is likewise subjected to various regulations and methods of surveillance to prevent its contamination and adulteration. Thus the authorities have taken measures to secure for the population, and especially for the patients, good wholesome food.

In visiting the sanatoriums of Nordrach, of Davos-Platz, and other places, my object was two-fold. First to accumulate evidence and information which should be of practical service in showing how popular sanatoriums should be established and managed in England; and secondly, to set forth the deficiencies of the so-called sanatoriums established by the late Mr. J. J. Jones at Sandgate and the necessity of legislative interference for their abolition. Therefore, and in regard to the latter point, as the late Mr. J. J. Jones advertised that at Sandgate the treatment given was similar to that generally practised at Davos-Platz, it is quite fair to ask whether when the late Mr. J. J. Jones was a member of the Sandgate district council he attempted to obtain the enactment of by-laws for Sandgate at all similar to those described above and applied at Davos-Platz. Was any effort made to prevent the cracking of whips and such noises as might disturb the patients at night? There is this similitude between Davos-Platz and Sandgate, that in both instances there are patients in the centre of the town, though at Davos-Platz all the popular sanatoriums are well away from the main road and the centre. In regard to disinfection, Mr. A. R. Bowles, surveyor and sanitary inspector of the Sandgate district, testified before the House of Lords Select Committee on the Sandgate Sanitary Powers Bill that the Jones's home, known as Grosvenor House, had been used as a convalescent home for phthisical patients and then for ordinary boarders. The local authority had not been informed of these changes nor was there anything to show that the place had been disinfected. As sanitary inspector he had never been asked to disinfect when changes were made. The medical officer of health of Sandgate, Dr. C. E. Perry, also bore witness that he had never been called upon to disinfect any of the Jones's homes. It was, however, stated that at least on one or two occasions Mr. Jones had burnt some sulphur in the rooms, notably of Ontario House. Mr. A. J. Gore, who is now in charge of these houses, declared that after the tuberculous patients had been removed from Ontario House and before ordinary convalescent patients were admitted to this home he himself saw the place thoroughly disinfected with formalin and sulphur. On the other hand, Dr. H. Scurfield, medical officer of health of Sheffield and professor of public health at the University College of Sheffield, testified that a medical man did not necessarily know how to disinfect a room. This is an obvious but an important point. It does not form part of ordinary medical education to teach a medical student how to cut long slips of paper or cotton-wool and to render a door or a window airtight, nor is a medical practitioner necessarily an adept at stopping up a chimney. He may know theoretically when it is indispensable to disinfect but the various processes of disinfection are matters of handicraft that form part of the education of an inspector of nuisances and other municipal functionaries. Therefore no disinfection can be counted as satisfactory unless, as insisted upon at Davos-Platz and many other places, it is carried on under the control of the public sanitary authority. Nothing of the sort was done at Sandgate and the contrast between Sandgate and Davos-Platz in this respect is most detrimental to the former town. Finally, it may be observed that before Sandgate can be compared with Davos-Platz a public slaughter-house must be constructed and more rigorous methods of controlling the food-supply introduced.

(To be continued.)

CHOLERA, PLAGUE, AND OTHER DISEASES IN THE NEAR EAST.

(FROM THE BRITISH DELEGATE ON THE OTTOMAN BOARD OF HEALTH.)

THE Turkish empire continues to be quite free from cholera. It is less certain whether Persia is equally so. Reports from Tehran, dated March 29th and April 5th and 12th respectively, stated that the sanitary condition of that country was satisfactory and that no case of cholera had been observed there since Feb. 26th. But the report of April 19th asserted that, in spite of official assurances, there were rumours that cholera was still prevalent at Meshed and at other places in the Khorassan province. On May 8th it was reported that sporadic cases of the disease were occurring in Tehran itself. The latest news, on the other hand, is to the general effect that the public health conditions of the country are "satisfactory" but on June 5th it was reported that some cases of "choleriform diarrhœa" had been observed at Hamadan.

Single cases of cholera are officially reported to have occurred on Russian territory at Askhabad on April 19th (May 2nd) and at Tsaritsyn on the Volga on April 21st (May 4th), and two suspicious cases were reported on May 15th from the Bogorodsk district of the Moscow government. No later news has been received and the presumption consequently is that no cases have been observed since.

The outbreak of plague at Aden has come to an end. During the week ending May 20th there were neither cases nor deaths from the disease. During the following week two cases and no deaths were reported. The last new case was observed on May 24th.

A sharp outbreak of plague has recently occurred at Bahrein, in the Persian Gulf. The date of the first case is not known but it was probably about May 10th. Up to the 20th of that month 20 deaths from the disease had been reported. Five days' quarantine was consequently imposed in Turkey upon arrivals from that island. News has since been received that the outbreak is declining. On the 19th of the same month two cases of plague were observed on a Persian Government boat, the *Persepolis*, which had arrived at Bushire from Bombay.

No further cases of cerebro-spinal fever have been reported in this city. In Russia, on the other hand, according to official news received here, this disease has been showing much activity recently. At the beginning of May some doubtful cases were reported from Rostof on Don and Kremenchug. Down to the end of April (old style) the number of reported cases in all Russia had been as follows: In January, 4; in February, 7; in March, 27; and in April, 15. Among the places in which the disease had been observed were the towns of Stavropol (in the Caucasus), Rostof on Don, Yaroslavl on the Upper Volga, and Lublin in Polish Russia, and the districts of Bendinsk in the Piotrkow government, and of Kuopio and Nyland in Finland. In addition three cases and one death were reported from Taganrog in May; five deaths also occurred in the Polish government of Radom, and (in April) two cases in the Elisavetpol government, nine in that of Kuopio, two in that of Viborg, and single cases in each of the Finnish governments of Nyland, Tavasthus, Abo, Bjorneborg, and Wasa.

Constantinople, June 29th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Medical Officers of Health and Motoring.

THE north-western branch of the Incorporated Society of Medical Officers of Health held its annual meeting at Lancaster on July 1st. A paper on the Public Health Aspect of Motoring was read by Mr. Herbert Jones who spoke approvingly of its indirect benefits, such as the great increase of housing space in large towns that would result from the removal from their centres of "all horses and carriages and carts and wagons," besides the advantage of doing away with a huge mass of offensive material. The horse must be stabled near its work but the motor might be kept ten miles away. The public health would be benefited by the cessation of "the wholesale dissemination of organic material contained in horse manure," which was shown by Professor S. Delépine to be the cause of extensive outbreaks of diarrhœa in Manchester. Mr. E. Sergeant, the medical officer to the Lancashire county council, thought the disadvantages greater than the benefits. The dust was a distinct danger and until roads were made fit for motoring, not only in regard to their surfaces but their width, he was of opinion that it was dangerous to health. Mr. J. J. Weave (Southport) said that the dust problem was largely due to the make of cars and might be left to engineers and road-makers. Dr. Meredith Young (Stockport) spoke of the great waste of water necessary to

keep down dust on roads and streets and said that motors would compel engineers to consider the best way of preventing dust. Mr. J. Settle (Barrow) was not thankful for the coming of motor-cars but feared they had come to stay. Mr. A. W. Martin (Gorton) spoke of the indirect benefits that would accrue to agriculture and said that if dust were got rid of, as it would have to be, the death-rate would be lowered and a diminishing birth-rate need not be feared. The President, Dr. J. F. J. Sykes, said that motors would ultimately lead to the improvement of the roads which would be a good thing. Motors did not make dust, they only raised it. In all this discussion nothing seems to have been said of the direct danger to life caused by reckless or unskilful driving, but the newspapers bear almost daily testimony to the reality of this danger and in too many instances to cowardly attempts by the motorists to get away without caring to learn the injury that they have done. Those who often experience the sickening smell accompanying the clouds of dust raised in dry weather on country roads, clouds frequently dense enough to hide the car and its occupants in a few yards, have, no doubt, borne without taking action a nuisance which is declared by this society of health officers to be dangerous to health and therefore to life. Hence it is clearly their duty to take such action as may be necessary to make the roads and streets a little safer than they are at present from danger to life and limb and freer also from the dust dangers which they unite in condemning. But the subject bears sometimes a slightly comic aspect. A case that occurred on the same day as the meeting at Lancaster—July 1st—at Kendal shows that a medical officer of health may differ in opinion from some of his brethren and take steps, as no doubt he ought to do, to guard himself against the dangers of the road. A man was summoned for failing to stop his motor-car when requested to do so by the driver of a horse and trap. Mr. R. M. Craven stated that when driving along one of the Kendal roads he saw a motor-car approach. When within 80 yards of it, being afraid that his pony would shy, he put up his hand and also a flag as a signal for the driver to stop. "Why don't you stop?" he asked the driver, who made no reply. He admitted having written to a newspaper saying: "I am a horse-driver and enforce my rights on the highway. I have a red bunting flag and when I hear a motor-car coming I raise my hand and my flag. If the motor-car driver gives me my side of the road and slows down to six or eight miles an hour I lower my flag and allow him to come on. If he does not I keep my flag aloft and stop him dead until I drive my pony past him." The defendant in his evidence said that when he met Mr. Craven "he pulled up dead slow until he reached him." To show how our own conduct, eminently sane as we think it, may strike one looking at it from another standpoint the defendant said that when passing he remarked to his brother that "the man must be mad." He was "completely dumbfounded by the red flag," so that it is evidently a valuable weapon with which to encounter motorists. The magistrates dismissed the case, the defendant paying the costs, 22s. 6d. It seems a little hard that motorists should almost monopolise the high roads, to the maintenance of which they contribute so little, and if the roads are to be widened and made dustless the cost should fall on those who make the change necessary and not on the long-suffering local ratepayers.

Bravery.

In THE LANCET of April 1st a brief narrative was given of the brave doings of the boys at the school for the deaf and dumb at Preston when a fire broke out. It is gratifying to learn that silver medals are to be given to two of them, Nicholas J. Dalton and John Jackson. The fire was discovered in the early morning and "the two lads climbed down a waterspout from the dormitory windows, summoned assistance, and helped to bring ladders by which their comrades escaped from the dormitories." At Preston, by the way, a lad, aged 12 years, while bathing in the Ribble recently got out of his depth and was saved from drowning by a man named Albert Edward Lowe who had previously saved eight lives.

Smoke and the Magistrates.

Some places seem to delight in the manufacture of smoke and to be as proud of it as if it were their best paying product. At Sheffield on June 22nd an Attercliffe firm answered a summons which alleged that they had disobeyed an order to abate a smoke nuisance, "but the case was not heard because the magistrates on the bench, themselves cutlery manufacturers, declined to adjudicate." The chairman, Mr. J. E. Beal, said: "You had better take it to the other court; you will not get any sympathy from me," and he declined to hear it. The summons was then taken to the other court and there, also, the chairman, Mr. G. F. Lockwood, declined to hear it. On the face of it this "passive resistance" by the magistrates does not look creditable but it may be that tenderness of conscience sometimes prevents sinners from rebuking sin.

Tests of Sobriety.

Mr. E. A. Humphreys of Northenden, surgeon to the police, recently described at the Stockport police court his test for drunkenness as applied to three men accused of being drunk on licensed premises. He made them shut their eyes and walk backwards, and he said that few men could do it when sober and if they succeeded they were certainly not drunk. They had also to write their names with a quill pen, to walk along a straight line, and to stand still with their heels together. He accepted the definition in Murray's dictionary that a drunken man was one who had 'taken intoxicating liquor to an extent affecting steady self-control" and described the symptoms as "staggering when walking, incoherent speaking, and lack of reasoning power." There is no doubt that the tests named are applicable to those in the condition described, but they do not cover those cases of more complete narcosis where the diagnosis between drunkenness and brain mischief is not self-evident.

July 4th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

The Somerset County Council and a County Medical Officer of Health.

THE question of the appointment of a county medical officer of health of Somerset has been often discussed at the meetings of the Somerset county council. At a meeting held at Wells three months ago the sanitary committee obtained the sanction of the council to a proposal to appoint a medical officer of health at a yearly salary of £150, travelling and other expenses being estimated at another £100. Applications for the appointment were duly advertised for and 30 gentlemen applied for the post. Four candidates were selected and attended the meeting of the county council held at Taunton on June 27th. Unfortunately for the candidates a member moved that the resolution passed at the previous meeting providing for the appointment of a county medical officer of health should be rescinded and this was carried by a majority of one. The chairman expressed regret that the candidates had been asked to attend unnecessarily and assured them that their travelling expenses would be paid. Following upon the decision the chairman of the sanitary committee resigned his connexion with the committee and suggested as his successor the mover of the rescission of the previous resolution.

The Water-supply of Taunton.

A new storage reservoir, capable of holding 120,000,000 gallons, in connexion with the Taunton water-supply was formally opened by the Mayor on June 30th. The reservoir is situated at Luxhay, on the Blackdown Hills, eight miles from Taunton. It will have a water area of 17 acres when filled, with a depth of water of 57 feet. The cost of the undertaking has been about £26,000.

The Royal Hamadryad Seamen's Hospital, Cardiff.

The old *Hamadryad* ship has done good service during the past 40 years as a hospital for sick and injured sailors who land at the Port of Cardiff but it has been realised for some years that a building with more modern requirements ought to be provided and in 1897 it was decided to commemorate the diamond jubilee of the late Queen Victoria by establishing such an institution. The late Marquis of Bute associated himself with the project in the heartiest manner. He gave the principal portion of the site and at once subscribed £10,000 towards the building fund. After his death, which occurred shortly afterwards, it was found that his trustees were empowered to give further sums up to a total of £30,000 if they were required, so that it has been possible to provide a building well equipped in every respect. There are three main wards each containing 16 beds, and smaller wards bringing up the total accommodation in the hospital to 60 beds.

The walls are of impervious parian cement with rounded corners and the floors are of terrazzo. The architect, Mr. E. W. M. Corbett, took some pains to ascertain from the principal officers of existing hospitals which was the best material of which to form the ward floors and finally decided in favour of terrazzo. The ventilation of the wards is provided for by the so-called "natural method" by means of floor level inlets and outlets in the flues. The incoming air can be warmed if necessary by radiators. The warming is by low-pressure hot-water pipes. The entire building is lighted by electricity. Adjoining the hospital proper is a detached residence for the medical superintendent. Three of the beds have been endowed but for the maintenance of the hospital the managers rely principally upon a voluntary tax which the shipowners levy upon themselves. The foundation-stone of the institution was laid in 1902 by the Marquis of Bute when he came of age and was formally opened by him on June 30th last.

The West Cornwall Infirmary, Penzance.

The new West Cornwall Dispensary and Infirmary at Penzance is now nearly completed and it is hoped that it will be ready for the reception of patients in about three months. The cost of the building will be about £8000 and of this sum members of the Bolitho family have contributed £4500. The hospital comprises a central administrative block of two storeys, having a ward on each side, with various private wards, &c., attached. From the south wing of the building the new public dispensary will be built. A well-fitted operating theatre and a laundry, &c., have been added.

The Medical Officer of Health of the Gloucestershire Combined Sanitary District.

At the meeting of the Chipping Sodbury rural district council held on June 27th the resolution passed at the recent conference of representatives of the urban and rural districts comprised in the Gloucestershire combined sanitary districts urging the Chipping Sodbury rural council to reconsider the matter of the appointment of a medical officer of health and not to withdraw from the combination was brought forward. After a long discussion the council decided by a majority of two votes not to reconsider the matter. In view of this very small majority it ought not to be difficult for the Local Government Board to act upon the representation made by the 11 councils for whom Dr. Bond still acts and by exercising the powers given under Section 286 of the Public Health Act of 1875 to form a compulsory combination.

Cardiff College New Buildings.

An important step has been taken towards the removal of the reproach which has attached to the Cardiff constituent college of the University of Wales in respect of the temporary and other erections which have done duty as college buildings during the past 20 years. On June 29th His Royal Highness the Prince of Wales, the Chancellor of the University, laid the foundation stone of the new buildings which are to be erected in Cathays Park, the large open space right in the centre of Cardiff, upon which it is intended to group all the most important public buildings of the town, including the town-hall and law courts, now nearly completed. A complete scheme has been drawn up in which the college buildings are arranged around a large court having an area of 52,000 square feet. For the present the administrative and arts block together with the library, the gift of the Drapers' Company, will be erected. The medical, anatomical, public health, metallurgical, engineering, and other departments will only be proceeded with as funds are forthcoming and for the same reason the erection of the great central hall will also be delayed.

Bristol Royal Infirmary.

A large carnival has just been held in the Zoological Gardens, Bristol, in aid of the Bristol Royal Infirmary. Sir George White, Bart., the president of the infirmary, has been the leading spirit in the inception and execution of this idea for helping the infirmary and was supported by a large deeply of willing helpers. The Duchess of Beaufort became number interested in the scheme and induced a large number of ladies to take an active part in carrying it out and herself declared the carnival open. The presidents of the various medical charities in the city attended as did many of the workers for those institutions, and altogether Bristol has thoroughly given itself over to the spirit of festivity with a laudable object.

July 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Quater-Centenary of the Royal College of Surgeons of Edinburgh.

AT the quater-centenary celebrations of the Royal College of Surgeons of Edinburgh the following will be admitted honorary Fellows of the College:—The Director-General of the Royal Navy Medical Service; the Director-General of the Army Medical Service; the Director-General of the Indian Medical Service; the President of the Royal College of Surgeons of England; the President of the Royal College of Surgeons in Ireland; the President of the Faculty of Physicians and Surgeons of Glasgow; the President of the Royal College of Physicians of Edinburgh; the Right Hon. Lord Lister; Professor Lucas-Championnière, Paris; Professor Paul Segond, Paris; Professor Guyon, Paris; Professor Francesco Durante, professor of clinical surgery, University of Rome; Professor Vincenz Czerny, professor of surgery, Heidelberg; Professor Ernst von Bergmann, University of Berlin; Professor König, professor of surgery, Berlin; Professor Ernst Fuchs, professor of ophthalmology, University of Vienna; Professor Krönlein, professor of surgery, Zürich; Professor Carl Gustaf Lennander, professor of surgery, Upsala; Professor Saxtorph, professor of surgery, Copenhagen; Professor Halsted, professor of surgery, Johns Hopkins Hospital, Baltimore, U.S.A.; Professor William W. Keen, M.D. (hon.), professor of surgery, Jefferson Medical College, Philadelphia, U.S.A.; Professor J. Collins Warren, M.D., professor of surgery, Harvard Medical School, Boston, U.S.A.; Dr. Charles M'Burney, New York; Dr. W. J. Mayo, Rochester, Minnesota, U.S.A.; Professor Shepherd, professor of surgery, M'Gill College, Montreal, Canada; Professor Irving Cameron, professor of surgery, Toronto, Canada; Sir T. N. Fitzgerald, Melbourne, Australia; Dr. MacCormick, Sydney, Australia; Baron Yasuzumi Saneyoshi, director-general, I.J. Navy, Bureau of Medical Affairs, Tokio, Japan; Professor Anton Freiherr von Eiselsberg, professor of surgery, Vienna; Professor Poncet, professor of surgery, Lyons; Professor Terrier, Hôpital de la Pitié, Paris; Professor Subbotin, St. Petersburg; Professor Bier, Bonn; and Professor Bruno Krogius, Finland.

Medical Defence in Scotland.

In THE LANCET of Oct. 29th, 1904, p. 1239, was gven an outline of an action which Dr. John Lithgow of Cleland in Lanarkshire had brought against Messrs. Thomas Gibb and Sons, Limited, trading as quarrymen. They had given to Dr. Lithgow notice summarily to terminate his appointment and had withheld the fees subsequently payable. Dr. Lithgow then brought an action on a part of his case; it was conducted for him by the Medical Defence Union and was decided in his favour. Other litigation followed, also conducted on Dr. Lithgow's side by the Union, and on June 23rd in the Sheriff's Court, Glasgow, Sheriff Boyd supported Dr. Lithgow's claim by ordering Messrs. Gibb and Sons to produce within ten days a full account of the sums retained by them from the wages of their workmen at Auchinlee Quarry, Cleland, in name of medical fees during the period from April 1st, 1903, to Feb. 11th, 1905.

St. Andrew's Ambulance Association.

The council of the St. Andrew's Ambulance Association has just issued its twenty-second annual report. During the past year 6267 calls have been made on the wagons of the association and the total number of patients conveyed since the formation of the association is now 70,629. In Glasgow alone the number of calls has been 3822. This represents an average of 10 47 daily. A brief analysis of these may be of interest. Out of the total of 3822 calls, 2474 were to accidents and 1348 were to cases of illness. In 151 cases the wagons were not required on arrival. Of the 2474 calls to accidents, 808 were from police offices, houses, and stairs; 782 were street accidents; 361 were from public works; 218 were from docks and wharves; and 154 from railways and stations. 2035 cases were taken to the Royal Infirmary, 833 to the Western Infirmary, 227 to the Victoria Infirmary, and 128 to the Maternity Hospital. the remainder being taken to their homes or to other institutions. The council draws the attention of the public to the fact that in cases of accident the ambulance wagons can be called for by any person by day or night free of all cost and responsibility. On receipt of an alarm, sent

by messenger, telegraph, or telephone, a wagon will be despatched at once to the scene of the accident, and should such accident happen in any of the principal centres of the association the wagon will be under the charge of a trained attendant who, in the absence of a medical man, will temporarily dress the injuries and accompany the injured person in the wagon to his own home or to the nearest infirmary. As regards instruction in ambulance work the association has conducted and examined 379 classes in first aid to the injured" and 17 in home nursing and hygiene. The arrangement made with the Scottish Education Department for utilising the machinery of the Evening Continuation Class Code for spreading the knowledge of ambulance work has been very successful, a large number of school board classes having been conducted during the year. During the past year there were issued 4412 first-aid certificates, 330 nursing certificates, and 95 re-examination vouchers, making a total of 4837. In addition to these 1724 medallions were awarded to certificated pupils who, after attending a second course of lectures, passed an examination of a higher standard in first aid. Sanction has been given during the year for the issue of a medallion for home nursing and hygiene, and it is hoped that this will lead many to perfect themselves in these important subjects. Classes in connexion with the police forces in the counties and burghs continue to be formed with satisfactory results. The value to the public of the efficient training of the police in first aid cannot be over-estimated and the council is taking steps to insure that the new badge, bearing the name of the association, shall only be worn by certificate-holders who keep themselves efficient in ambulance work. In view of continued efficiency the council strongly recommends the formation of sections of the St. Andrew's Ambulance Corps among the trained men of the police, as an annual re-examination and inspection under the auspices of the association could then be held. In moving the adoption of the report, the Marquis of Breadalbane, who is President, remarked that the two points which struck most people about it were the enormous amount of work done during the year and the smallness of the income of the association. It was satisfactory to note, however, that the expenditure was within the income, but only by the sum of £10 4*s.* 11*d.* It was to be hoped that the public would come forward and more generously support the association as its income was entirely made up by voluntary subscriptions and its existence and public benefit depended very largely upon the amount received.

To Help the Infirmaries.

The second annual fancy dress parade organised by the cyclists of Glasgow in aid of the funds of the Royal, Western, and Victoria Infirmaries was held last Saturday. The weather was all that could be desired and the procession aroused considerable interest, the net amount collected being upwards of £300.

Death of Dr. Frank Hay Cantlie.

The death occurred on June 16th of Dr. Frank Hay Cantlie, youngest son of the late Mr. William Cantlie of Keithmore, Dufftown, and brother of Mr. James Cantlie, F.R.C.S. Eng. Dr. Cantlie, who was on his way out to China, died on board the P. and O. steamer *Formosa*. Dr. Cantlie graduated M.B. at Aberdeen in 1897 and thereafter proceeded to China. He secured the appointment of medical officer of the port of Swatow and held several important posts there, as well as having a considerable practice. Dr. Cantlie's health broke down and he returned to this country. He was for some time house surgeon of Gray's Hospital, Elgin, and later he took up his residence at Strathmore, Keith, and started practice in that town, one of his official posts being that of medical officer to the local lodge of Free Gardeners. Dr. Cantlie then removed to London, having been appointed house surgeon in the Westminster Ophthalmic Hospital. He was on his way back to China when his death occurred.

Kingseat Asylum, Aberdeen.

At a meeting of the lunacy committee of the Aberdeen City district lunacy board on June 27th Mr. John M'Gregor, convener, presiding, Dr. C. Angus, superintendent of Kingseat Lunatic Asylum, reported that the estimate of the sum required for the maintenance of the asylum for next year, including wages, clothing, lighting, food, &c., was £10,807 0*s.* 5*d.* To that sum would have to be added any deficit that might arise on the maintenance account of last year. Dr. Angus estimated that there will be about 390 patients in the asylum during the year.

Royal Army Medical Corps (Volunteers).

The annual inspection of the Aberdeen companies took place in the grounds of the Grammar School on July 1st. There was a full muster of all ranks. The inspecting officer was Colonel Hughes, principal medical officer of the North British District. Major Riddell was in command of the corps and the other officers on parade were Captains Mackintosh, Kelly, Ogston, and Fraser, Lieutenants Rorie, Mitchell, Wallace Milne, Noble, and Smart, Lieutenant and Quartermasters Innes and Cromar, and Chaplain Rev. James Smith. The men fell in at 3.15 P.M. and the inspection took place at 4 o'clock. Colonel Hughes, who arrived in his motor-car, was received with the general salute. The inspecting officer at once proceeded to make a very minute inspection of the men's uniforms and equipment. He also examined every man's sword. After inspecting No. 1 and No. 2 Companies he proceeded to inspect the Gordon Bearer Company, the transport section, and the hospital section. The corps was then formed up and marched past the saluting base. The men were then inspected in stretcher drill and first aid to the wounded. The sergeants of the various companies were also called out and had to drill their companies individually. The inspection, which lasted for over two hours, concluded with an exhibition of dressing the injuries of those who had been wounded in battle, the collecting of the wounded in the field, and transporting them to hospital, which had been constructed on the field. A short time before the inspection concluded rain began to fall heavily. The inspection was the most thorough one that the medical corps has ever undergone.

July 4th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Medical Examination of Trinity College.

THE Roman Catholic Archbishop of Dublin, in a speech delivered on July 2nd, made some very strong criticisms of the method by which the medical examinations of Trinity College have been recently conducted, referring especially to the action of the General Medical Council in their regard. The Provost, Dr. A. Traill, has addressed a letter to the morning papers of July 4th, traversing the charges and concluding as follows:—

So far from the medical school of Trinity College being a "close borough" there are at present nine external examiners and 14 University examiners, including the two Regius professors, of whom Dr. Little does not teach and Sir Charles Ball gives clinical teaching only. I have always found the Archbishop so fair, in my experience of him, in educational matters, that I am sure that if he had been aware of the above facts, he would have adhered to his first thought that "it would be much more pleasant if they were allowed to discuss the university question without invidious reference to Trinity College."

Royal College of Physicians of Ireland.

In the list of birthday honours recently conferred by the King the name of Dr. William J. Smyly, President of the Royal College of Physicians of Ireland, appears as a recipient of the honour of knighthood.

Dr. Robert Morton of Nenagh.

The many friends and patients of Dr. Robert Morton of Nenagh have recently presented him with an address and a testimonial in recognition of his long and faithful services to the district in which he has lived for so long. Dr. Morton was formerly well known in Dublin as one of the examiners in general education to the Royal College of Surgeons in Ireland. The testimonial included a cheque for £400.

The Salaries of Dispensary Medical Officers.

At the weekly meeting of the Coleraine union guardians held on July 1st it was decided that the salary of each of the dispensary medical officers should be £100, rising by increments of £10 to £150; that the salary of the workhouse medical officer should begin at £60, the maximum being £130; and that, in the event of the retirement of the workhouse medical officer, the post should be amalgamated with that of the Coleraine dispensary, the officer of which shall have a salary commencing at £130 and rising to £180.

Ulster Medical Society.

The annual meeting of the Ulster Medical Society was held in the Medical Institute, Belfast, on June 29th. From the reports presented it would appear that there is financially a balance in hand of £155 18*s.* 6*d.* There are 184 members.

The following officers were elected for the ensuing session: President: Dr. W. Calwell. Vice-Presidents: Dr. J. C. Martin (Portrush) and Dr. J. R. Davison. Treasurer: Dr. V. G. L. Fielden. Secretary: Dr. Thomas Houston. Librarian: Dr. W. L. Storey. Editorial secretary: Dr. H. Stevenson. Members of council: Dr. W. B. McQuitty, Dr. J. S. Morrow, Dr. D. J. McKinney, Mr. R. Hall, Dr. R. J. M'Cullough, and Dr. David P. Gaussen. The above with the permanent trustees (who are members of council)—Dr. J. Nelson, Dr. J. Campbell, Dr. J. A. Lindsay, Dr. A. Dempsey, Dr. John McCaw, and Mr. A. B. Mitchell—constitute the office-bearers for the ensuing session. A motion was carried that the secretary should send a vote of condolence to the friends of the late Dr. G. F. Wales, a former president of the society. It was also announced that Sir Otto Jaaffe is presenting to the society a copy of an oil portrait of Jenner which is in the National Portrait Gallery.

The Foreshore of Belfast Lough.

A meeting of property owners on the western side of the beginning of Belfast Lough was held on June 30th to protest against the continued pollution of the foreshore by the discharges from the sewage outfall works. At present about four acres are used for bacteria beds and cesspools at the outfall works of the city sewage. The corporation is now inclosing from the sloblands adjoining a further space estimated at 70 acres. It is intended to cover this ground with additional bacteria beds, and it is against the odours emanating from the inclosed slobland and the bacteria beds that the ratepayers in the district are protesting.

The Health of Belfast.

At the monthly meeting of the corporation of Belfast, held on July 3rd, it was reported that between May 21st and June 11th 204 cases of zymotic disease—viz., 69 of simple continued fever, 62 of typhoid fever, 37 of scarlet fever, 27 of erysipelas, and 9 of diphtheria—had been notified. The annual death-rate was 18·5 per 1000. Scarlet fever is very mild and has been attended with a very slight mortality (only one death being recorded in four weeks); the deaths from measles still keep numerous and the epidemic is most prevalent in the east part of the city. Another case of small-pox has occurred but the source of infection from which the disease may have been contracted remains, in spite of great inquiry, a mystery. In reference to the offensive emanations from the foreshore the chairman of the public health committee said that there was ground for complaint. He hoped when the reclamation bank was completed to remedy this, and in the meantime the Antrim foreshore as far as the city boundary would be cleansed by the public health committee.

July 4th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

On Prolonged Intubation.

AT the meeting of the Pediatric Society held on June 20th M. Deguy and M. Le Play gave an account of various cases of intubation where the tube had been left in during a long time, despite a certain amount of ulceration of the larynx. In one case intubation had been performed 11 times and the tube was left in for a period altogether of 20 days. The only alternative to this procedure would have been tracheotomy. Prolonged intubation has the advantage of avoiding the risks of tracheotomy in children together with its tedious sequelæ of the healing of the wound in the trachea. M. Sevestre said that in his practice he was accustomed to perform tracheotomy when obstructions still existed after the third or at the longest the fourth intubation. For his own part he considered that prolonged intubation had many disadvantages.

The Treatment of Club-foot.

At the meeting of the Paris Hospitals Resident Medical Officers' Society held on June 22nd two interesting papers on the subject of club-foot were read. The first dealt with a case under the care of M. Péraire and was that of a youth, aged 16 years, who had suffered from irreducible talipes equino-varus. M. Péraire treated him by lengthening and suturing the tendo Achillis and by a muscular tendinous graft of the tibialis anticus with the extensor proprius hallucis and the extensor communis digitorum. The result of this was that the patient walked well and without fatigue. More than that he could wear any kind of boot and had not to wear any apparatus. The other cases referred to had been under the care of M. Monnier. They were two patients suffering from congenital equino-varus. One of them, aged five years, suffered from double talipes and had been operated on after the Phelps-Kirmisson method with a good result. The other patient, aged seven years, had right talipes equino-varus. In this child the Phelps-Kirmisson operation did not sufficiently correct the deformity so M. Monnier took out an osseous wedge, with its base towards the upper external side, at the expense of the os calcis—a procedure which, together with tenotomy of the tendo Achillis, gave an almost perfect result. This operation was practically that of Phelps-Félizet, modified owing to the youthful age of the patient by taking the osseous wedge from the os calcis and not from the cuboid.

The Physiological and Therapeutic Effects of Neuronal.

M. Marie, M. Pelletier, and M. Viollet communicated a paper to the Therapeutical Society on June 14th concerning their researches upon neuronal or bromdiethylacetamide. In toxic doses this drug paralyses successively both the unstriped and the striped muscles, especially those in the coats of the arteries. In medicinal doses—that is to say, in doses of one gramme—it is a very useful hypnotic in cases of simple insomnia and in states of mental confusion or of subacute mania. Neuronal has no cumulative effect even when it is given for many days. The dose does not require increasing and when the drug is left off no trouble apparently arises.

A Hospitals Clothing Association.

There has just been started in Paris a Hospitals Clothing Association. As its title suggests the object of the society is to distribute clothing to patients who go out of the hospitals and have to look for work. The society appeals to its supporters for articles of clothing, either new or previously used, of any kind, and for money with which it may buy such articles.

Bread as a Source of Tuberculosis.

At a recent meeting of the International Tuberculosis Society Dr. Georges Petit showed that bread is capable of being an important factor in the propagation of tuberculosis. When the various processes through which flour passes on its way to become bread are considered it is easy to understand that the successive manipulations which the dough undergoes can easily favour the introduction of the germs of tuberculosis. It is above all during the kneading process that the danger is most patent. The workman, who is called *geindre*, heaves up a large lump of dough and lets it fall, grunting as he does so. This heaving up and throwing down again of the dough are necessary to introduce air into it. When it is considered that bakers' labourers are affected with tuberculosis to the proportion of some 70 per cent. it is easy to see what facilities there are for the entrance of the tubercle bacillus into the dough. Moreover, when the bread is baked it does not attain a temperature of over 100° C. in the middle of the loaf and the slight portion of time which elapses between the baking of the bread and that of its consumption is favourable to the dissemination of the bacillus of tuberculosis. Dr. Petit said that these facts were confirmed by the experiments of Galtier and of Macé as well as by his own. The question is so important from an alimentary point of view that it would seem well to replace hand kneading by machinery.

July 4th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

A Hospital Fund in Vienna.

SEVERAL benevolent institutions have made an effort to introduce here the English system of collections in the streets for charitable institutions. Most of these institutions are kept up by the Government, but as the funds are scanty an appeal was made on behalf of sick children. The novel idea has not been a full success as yet, since the collection was combined with a fête which required a good deal of the income to cover its own expenses. Anyhow, £4000 are now available from this source and will be divided amongst two children's hospitals and several kindergärten. The new infants' milk hall, which does so much

charitable work amongst the most needy and the weakest infants, will receive fully one-third of the sum to enable it to establish branch halls in some outlying district. It is proposed to repeat the appeal on a larger and more efficient scale and to use only those methods which give such good results in London. The population need only be brought to understand better than they do at present hospitals and their absolute necessity for the public welfare.

Post-graduate Lectures at the University of Vienna.

During the months of July, August, and the first half of September post-graduate lectures and courses will be held by a number of *docenten* and assistants of the clinics. As a rule the courses last for four weeks. Their object is to inform the practitioner of the progress of medicine, to introduce him to the latest methods of investigation and diagnostic technique, and to rehearse, in short, modern ways of scientific research and treatment. The fee is nearly uniform, £4 4*s.* for each course, and they offer an excellent means of practitioners keeping themselves up to date. Surgery and medicine, bacteriology and physiological chemistry will be the chief subjects of the lectures, whilst special surgery, gynæcolcgy, and morbid anatomy will only be lectured upon if a sufficient number of gentlemen (at least four) make application.

A New Midwives Act.

Dr. Cantor has worked out the regulations for a new Midwives Act which it is proposed to bring before Parliament in its next session. The system in force hitherto is quite insufficient. The women have little education, except in the towns, and their scientific knowledge is very slight. Only a few are appointed or paid by the local authorities and the pay itself is ridiculously low. Thus they are forced to work otherwise for their living and they look upon midwifery only as their secondary occupation. An amelioration of the present state of things is not difficult. There are sufficient lying-in hospitals and obstetric wards and plenty of suitable women would apply for scholarships and instruction if their future were made safe by adequate pay. Therefore Dr. Cantor proposes that there should be created appointments for midwives, each worth from £20 to £30 a year, and that a tariff should be formed for their professional work below which tariff no midwife would be likely to go to a patient. The instruction would be compulsory, lasting one year, and an examination would have to be passed at the end of the term of instruction. A certain amount of elementary knowledge would be the *conditio sine qud non* for entering the midwives' school. The whole country except the towns would be allotted into districts and each district would be given to not more than three midwives. They would be obliged to call in a duly qualified medical man in every abnormal case, also in cases of multiple gestation (twins, monsters), and would not be allowed to undertake any surgical or medical treatment of mother or child. And, finally, all midwives would be bound to prove their learning by obtaining a sort of diploma, without which they could not be registered.

The New Dean of the Medical Faculty.

Professor Emil Zuckerkandl, the well-known anatomist, has been elected dean of the medical faculty for the year 1905-06. It is the second time that he has been called to this coveted post of honour. Whilst in office five years ago he gained the love of the students and the esteem of his colleagues to such a degree that he has been elected unanimously for a second time within ten years.

June 29th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Government Control of Vaccine Virus.

NEARLY two years ago Congress passed a law to regulate the sale of viruses, serums, toxins, and analogous products and to regulate interstate traffic in such articles. Previously anyone could make a product, label it vaccine virus, and place it on the market regardless of the impurities which it contained. In accordance with the law the officers of the Public Health Service have made an inspection of each establishment manufacturing vaccine virus in the United States and the result was that a number were found to be using old and obsolete methods, quite regardless of sanitary rules. These were required to conform to the new rules or to close their works and in several instances the latter alternative was adopted. At present there are eight producers of vaccine in this country licensed to engage in the manufacture and interstate sale of this article. These are under close supervision and their products are inspected monthly by the experts at the hygienic laboratory of the Government. The inspector is accompanied by experts and a rigid examination is made of all portions of the establishment, stables, barns, warehouses, records and animals, water-supply, disposal of refuse, and the screening of animals from insects. The samples used for testing the virus are purchased in the open market monthly and the tests are as to purity and potency. The results of the enforcement of the law for 18 months are most gratifying; the defective establishments have been eliminated and those licensed are maintaining a very high standard of excellence in all their operations.

A New School of "Medical" Practitioners.

A Bill passed the Minnesota legislature authorising a class of persons to practise "chiropractic medicine." The Governor of the State vetoed the Bill, stating that "chiropractic has not yet become a science or even a school, and at best but an untried experiment, which has produced no lasting or definite results. Among the applicants for position on this proposed board are insurance agents and men in other walks of life with absolutely no medical training whatever. The health of the public is the first essential and should be safe-guarded by every possible legal requirement, and if chiropractic must be recognised at all, those practising this so-called art should certainly be required to pass examination in the essential branches by due and regular examination before the State Medical Board, which represents the best thought and is the recognised and established standard which has been developed from the experience of the ages."

Official Report on Acetanilid Mixtures.

The first report of the Council of Pharmacy and Chemistry of the American Medical Association is on the acetanilid preparations and the results will prove very instructive to the medical profession. Specimens of the articles were bought in different cities in the open market and in original sealed packages. Each article was examined by at least two chemists. While some of the preparations are represented as being chemical compounds, the specimens examined were all found to be mixtures, the principal ingredient being acetanilid. Large quantities of these mixtures are popular remedies for headache and are freely sold to the public. The following examples are given:—Ammonol contained the following ingredients, approximately, in the proportions given: acetanilid 50, sodium bicarb. 25, and ammonium carb. 20; antikamnia: acetanilid 68, caffeine 5, citric acid 5, and sodium bicarb. 20; Koehler's headache powders: acetanilid 76 and caffeine 22; phenalgin: acetanilid 57, sodium bicarb. 29, and ammonium carb. 10.

Governmental and Private Responsibility in the Prevention of Tuberculosis.

At the recent meeting of the National Association for the Study and Prevention of Tuberculosis, the following conclusions were adopted:—"We emphasise publicly and primarily the duty of governments, especially State and municipal, in the more general founding and maintenance of sanatoria and encourage the philanthropic opportunity of private individuals to the same end; we emphasise the educational, disciplinary, and hygienic value of these sanatoria and special hospitals, not only to the segregated, instructed, and aided patients themselves, but to the general practitioner and to those patients for whom institutional treatment is not possible."

A Stringent Sanitary Law.

The legislature of the State of California has passed a law making it a misdemeanour to own, to lease, to let, or to hire any room for a lodging or sleeping apartment that contains less than 500 cubic feet of air space "in the clear" for each occupant; it is also a misdemeanour to be an occupant of such apartment. If this law is strictly enforced vast numbers of the people of that State will soon face heavy fines or a prison.

June 28th.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Medical Research in India.

A RESOLUTION has been issued by the Government of India in connexion with medical research. It implies a provision for more adequate means for the scientific study of the etiology and nature of disease and admits that the former financial difficulties have disappeared. The successful administration of the Pasteur Institute at Kasauli has apparently led the Government to see at last that it only requires the necessary opportunities for the existing staff of scientific workers in India to show that they are worthy of the problems that confront them. The resolution goes so far as to say that when the scheme is developed it should no longer be necessary for officers to leave India to study the bacteriology and parasitology of tropical diseases. This is an admission of past neglect, because India should even now attract officers to it for the study of such diseases. A central research institute will be established at Kasauli and a laboratory for scientific, medical, and sanitary work at the headquarters of each provincial government. The function of the central laboratory will be original research, the preparation of curative sera, and the training of scientific workers. The provincial laboratories will apparently be for the provision of expert assistance for the provincial medical and sanitary officers, with some original research work so far as opportunities will allow. At Guindy in Madras at the King Institute there will be general research work and probably the manufacture of some curative sera. At Bombay the plague research laboratory will become the provincial laboratory and some research work will be carried on in addition to the manufacture of the prophylactic. Bengal is merely referred to as having a laboratory attached to the Medical College and at Agra Hankin's laboratory is mentioned. There is to be a similar laboratory at Rangoon where medico-legal work is to be separately done. The first director of the central research institute is to be Colonel D. Semple, R.A.M.C. (retired). It will be noted that in the resolution there is no detailed reference to the opportunities for the scientific study of tropical diseases and no school of tropical medicine is even hinted at. There is no reference to a sanitary service for India or to any scheme for sanitary investigations. There is no indication that an adequate number of original workers will be appointed free from the embarrassments of other posts. The resolution itself is couched in such general terms that it may imply either that a great deal is to be done or that the existing institutions may merely carry out the apparently excellent programme. It is desirable to know something more definite and the new Sanitary Commissioner with the Government of India, on whom the responsibility for this research work will fall, should show that some well-organised and extensive research is going to be instituted.

The Decline of the Plague Mortality.

The mortality from plague continues to fall as expected. There were only about 15,000 deaths during the past week, whereas a month ago the deaths were over 50,000 in the week. The Punjab returns but 9000 deaths, as compared with 16,000 during the previous seven days; the United Provinces, 1700 deaths, as compared with nearly 3000; Rajputana, 2400; Bengal, 695; Bombay districts, 707; Madras Presidency, 14; and Burma, 85.

June 17th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

The New Midwives Act.

THE Government here, it would seem, is losing little time in getting to work to carry out the provisions of the Midwives Act which was passed in the closing hours of last session. The Act provides for the registration of midwives and the setting up of maternity homes for the teaching of midwives. Section 4 sets out that:—

> Every woman is entitled to be registered who satisfies the registrar that (*a*) at the commencement of this Act she had been for at least three years in *bonâ fide* practice as a midwife and that she bears a good character, provided that application for registration be made to the registrar on or before the first day of January, 1906; or (*b*) she holds a certificate in midwifery from any recognised training school in midwifery, or from the Obstetrical Society in London, or such other certificate as may be approved by the registrar; or (*c*) holds a certificate under this Act.

Section 5 says that:—

> There shall be established in New Zealand one or more State maternity hospitals where pupil nurses can, on payment of the prescribed fee, be carefully instructed in all the duties required for the welfare of mother and infant during and immediately after childbirth.

Every pupil must satisfy the examiners as to her proficiency and that she has attended lectures at a State maternity hospital or other institution recognised by the registrar as affording to its nurses sufficient training in midwifery for a period of six months in the case of a nurse registered under "The Nurses Registration Act, 1901," or of 12 months in any other case, and has attended the prescribed number of cases of labour. The Act contains machinery whereby a person may be removed from the register or suspended, when suspension appears necessary in order to prevent the spread of infection or on account of malpraxis. After Jan. 1st, 1907:—

> Every woman is liable to a fine not exceeding £20 who, not being registered under this Act, practises as a midwife, or takes or uses the name or title of a midwife (either alone or in combination with any other word or words), or any name, title, addition, or description implying that she is registered under this Act or is qualified to practise or is recognised by law as a midwife. Provided that nothing herein shall apply to any legally qualified medical practitioner, or to any woman rendering assistance in a case of emergency.

A large and commodious private hospital has been purchased in Wellington for the purpose of carrying out the provisions of the Act and a matron and an assistant matron have been appointed. The homes have been named "St. Helens Hospitals." There has undoubtedly been a scarcity of well-trained midwives in the colony and hitherto nurses desirous of taking up maternity work had either to proceed to England or to Sydney.

The Treatment of Pulmonary Consumption.

In the course of some 10 or 14 days the public of Wellington and suburbs subscribed over £2000 for the purpose of erecting annexes to the hospitals in that city and at Otaki for the treatment of pulmonary consumption. The Government will add 24*s.* to every £1 thus raised by private subscription, so that a sum of over £4400 is now available for the starting of this much-needed work. The sum may seem small to those who dwell in large places but it has to be remembered that the capital city of New Zealand has only some 49,000 inhabitants, and further, that as all public hospitals are supported by the State people are inclined to say, "Oh, let the Government put them up." The success of the appeal is largely due to the medical profession generally and to Dr. A. K. Newman and Dr. T. H. A. Valintine in particular. When the scheme outlined by the Minister of Health has been carried out in its entirety New Zealand will undoubtedly have done something to check the march of consumption. The idea is to erect small annexes in connexion with country hospitals situated in districts which have a reputation for excellence of climate. Patients will require to enter the hospital belonging to their several districts but later they may be drafted into the Government sanatorium at Cambridge. The cost of administering these annexes close to a general hospital will be much less than that of a separate institution, while from a preventive point of view their value will be almost as great. The patient will be housed in such a manner as to give him the best chance of recovery, he will be taught the value of fresh air, cleanliness, and a reversion to a more natural mode of life, while the destruction of the sputum will be assured.

Honour for the Inspector-General of Asylums.

A well-deserved tribute has been paid to our Inspector-General of Asylums (Dr. Macgregor) by his *alma mater* (Aberdeen) in presenting him with the LL.D. The acknowledged excellence of our asylums—that is, as regards all that pertains to their management—is in a large measure due to the firmness and foresight of Dr. Macgregor. An uncompromising opponent of all State coddling and salvation of the body politic through eleemosynary treatment, it has been his lot to run the hospitals and asylums of the most democratic of His Majesty's colonies.

The Sad Death of a Young Woman at a Private Hospital.

An event in Christchurch recently illustrates how sometimes the best-intentioned procedure may result in great wrong. According to the evidence given at the inquest a

young woman who, the medical attendant stated, suffered from hysteria was sent to a private hospital. She became violent and was placed in a "strait jacket" in addition to being strapped to the bed by the feet as well as by the neck. It would appear that she was left alone for some time. On returning the nurse found her lying dead, with her head over the side of the bed. Dr. W. H. Symes, who sent the case to the hospital, stated that he did not feel justified in certifying that she was insane. Dr. B. M. Moorhouse corroborated the statement. Dr. Symes stated that he had sent many cases to this particular home and had always been satisfied with the way in which the hospital had been conducted. A juryman asked whether, if the patient had been sent to the asylum, "she would not have been alive now." The coroner said, Yes. He commented upon the fact that the nurse actually in attendance on the deceased admitted that she had had no previous training with respect to such cases. The jury found that the deceased had died from suffocation and added a rider to the effect that such cases should not be allowed to be treated in private homes. The hospital in question was licensed by the Health Department. The certificate of character and ability was signed by two well-known medical men of standing in Christchurch. The building had been inspected carefully. An accident such as this points to the need of more frequent inspection, though it is difficult to see how a health official could have averted it unless he had been actually present at the time.

Wellington, May 20th.

Obituary.

JAMES MACNABB CUNINGHAM, C.S.I., M.D. EDIN., LL.D., K.H.S.,

SURGEON-GENERAL, I.M.S.

THE death of Surgeon-General J. M. Cuningham, which took place at Buckingham Palace-mansions on June 26th last, at the age of 76 years, removed an officer of the Indian Medical Department of long and distinguished service who had in his time occupied a very notable and influential position. He was intimately acquainted with Sir John (afterwards Lord) Lawrence and other Viceroys of India and socially, as well as in respect of his intellectual qualifications, was much esteemed and liked by Indian officials and men in authority. Surgeon-General Cuningham during his career filled some of the highest medical and sanitary posts in connexion with the Government of India and was at one time the administrative head of the service to which he belonged. He retired from the service in 1885, having entered the H.E.I.C.S. so long ago as in 1851. He was a graduate of the University of Edinburgh which in 1892 conferred upon him the honorary degree of LL.D. After having joined and held various appointments in the Bengal Medical Service he became secretary to the Sanitary Commissioner and was next appointed Sanitary Commissioner of Bengal, and afterwards (in 1875) as Sanitary Commissioner with the Government of India he had charge of the whole sanitary department of that country and was for many years the special adviser of its Government. His name also became widely known in connexion with the long series of annual reports which were issued during the time he occupied that office. In 1880 he became surgeon-general with administrative charge of the medical service in India. When he retired in 1885 he was awarded a Companionship of the Star of India and three years later he became honorary surgeon to Queen Victoria. He was a member of the Army Sanitary Committee from 1891 to 1896, and in 1894 he represented the Government of India at the Paris International Sanitary Conference. He was the author of a treatise on "Cholera: What can the State do to prevent it?" This is neither the time nor the place to discuss the policy adopted and followed by Surgeon-General Cuningham or to enlarge upon the views he held in regard to the origin and causes of Indian diseases and the best way of dealing with them, more especially with those of an epidemic character. Surgeon-General Cuningham was a man of both boldness and ability. He held very decided opinions in regard to these matters and set them forth in very plain and lucid terms in his reports, adhering as closely as he could in so doing to arguments based upon facts and figures, to the exclusion of all theoretical views, and especially to such as seemed to him to be demonstrated insufficiently to warrant the interference of the Government or the outlay of public money in their behalf. Endowed with an eminently common-sense and judicial rather than a scientific type of mind he always sought to look on his advisory duties to the Government not only from the standpoint of medical science but from that also of the statesman who has to incur the responsibility of giving effect to the advice which he receives.

DONALD URQUHART MACLENNAN, M.D. EDIN.,

MEDICAL OFFICER OF HEALTH, WIDNES, LANCASHIRE.

Dr. Donald Urquhart MacLennan was born at Milton, Glen Urquhart, on April 5th, 1851. He was the second of three brothers who all became members of the medical profession. He received his early training at the parish school of his native place—a glen famous for its beautiful scenery and romantic surroundings. He attended arts classes for one or two sessions at the University of Glasgow, but his medical studies were pursued at the University of Edinburgh, where he graduated as M.B., C.M. in 1878 and as M.D. in 1882. For a year after graduation he acted as assistant to the late Dr. Cran of Salford. In the year 1880 he commenced practice at Widnes and there he spent 25 busy years. In later years he became medical officer of health of the newly formed municipal borough, and those who remember Widnes 20 years ago will be ready to appreciate how much the chemical town owes to his energy and skill. Dr. MacLennan's professional career was one of hard and strenuous work. He was an active general practitioner of the best type and secured a large practice in the town and district.

A Highlander to the backbone, Dr. MacLennan was possessed of a buoyancy and exuberance of spirits that are alien to the Scoto-Celtic temperament. Good at his work, an active and vigorous personality, and generous to a fault, he was a bright, breezy companion—a man who made friends and kept them. Deeply interested in all things Celtic, he was one of the founders and original members of the Caledonian Medical Society and was president of the society in the year 1884. He was also chiefly instrumental in founding the Widnes and District Medical Society in 1895 and he was its first president. He often referred with pride to the fact that he had taken an active part in founding and establishing two distinct medical societies—one connected with his fatherland and the other with the town of his adoption. Eight years ago he broke down with a serious attack of pleurisy which developed into empyema. From this he made a good recovery but about a year ago hepatic troubles manifested themselves and despite the most careful nursing and all that his medical friends could do for him they pursued their sequence to the fatal end. He faced the inevitable, not only with fortitude but with a cheerfulness, brightness, and patience that were marvellous, particularly in a man of his untiring and indomitable energy. He was attended in his illness by his friend, Dr. J. R. Logan of Liverpool.

The funeral took place on June 7th and the ceremony was attended by the mayor, corporation, and officials, by many hundreds of the townspeople, and by numerous sorrowing friends from a distance. Dr. MacLennan is survived by his widow and five children. His eldest son is studying medicine at the University of Edinburgh.

PROFESSOR VON MIKULICZ-RADECKI,

PROFESSOR OF SURGERY IN THE UNIVERSITY OF BRESLAU.

OUR Berlin correspondent has already given our readers a note upon the career of the celebrated surgeon who is known to all Englishmen as Mikulicz and not by his full name as von Mikulicz-Radecki, and whose death took place on June 14th at Breslau, where he was professor of surgery. We may supplement this account by a few details. Professor Mikulicz was born in 1850 at Czernowitz; he studied at Vienna and received his degrees at the age of 25 years. After being for some time attached to the Universities of Cracow and Königsberg, he was in 1890 appointed to Breslau and raised the reputation of the surgical clinic there, till it was regarded as one of the greatest centres of surgical study in Germany. We need not here repeat what we have already published. In England Professor Mikulicz was best

known as the coadjutor with Professor von Bergmann of Berlin and Professor von Bruns of Tübingen in "A System of Practical Surgery," a review of which appeared in our columns quite recently. This work, in five volumes, which forms practically a complete surgical library in itself, was so highly appreciated by the profession of Germany that a second edition of the earlier volumes was asked for before the later ones were published. Italian and Spanish translations appeared almost immediately but the English translation by Professor W. T. Bull (the book which was reviewed on June 24th, p. 1723) has only recently been issued. This English translation has the advantage of being made from the second German edition and possesses over 100 full-page plates which were not given in the original.

The additions made to surgery by Mikulicz are not connected with any special department but are spread all over the science of surgery. With two operations, however, will his name be chiefly connected. Vladimirof had designed in 1872 an osteoplastic resection of the foot for disease of the tarsus but Mikulicz was quite unaware of what Vladimirof had done when he performed his operation. It consists essentially in the removal of the soft parts covering the heel, with the astragalus and os calcis, so that the cuboid and scaphoid are brought into contact with the same surface of the tibia and fibula and thus a condition of marked talipes equinus is produced. The operation is ingenious but it is even yet too soon to express an opinion as to its ultimate position in operative surgery. The other chief contribution to surgery is the operation of pyloroplasty. The idea of relieving a fibrous stricture of the pylorus by dividing it longitudinally and then suturing it transversely appeared to have occurred almost simultaneously to Heineke and to Mikulicz and therefore the operation is now frequently known by both their names. The device is applicable to many portions of the alimentary canal and, indeed, to all tubular viscera, and it has attained deservedly to a widespread employment, though in great part its use for the relief of fibrous stenosis of the pylorus has given way to gastro-enterostomy. As an operator Mikulicz was bold and ingenious, clever in devising expedients to overcome difficulties encountered, and skilful in carrying out the operations which he had devised.

PROFESSOR VON MIKULICZ-RADECKI.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Joseph Krieger, who was until a couple of

years ago head of the medical department of Alsace and Lorraine. His published papers deal with a variety of hygienic subjects, especially with the geographical distribution of disease and epidemiology. He was 71 years of age.—Dr. Viktor Wehr, professor of surgery in Lemberg, at the age of 52 years.—Dr. Robert King, professor of gynæcology in the St. Louis College of Physicians and Surgeons.—Dr. Peters, author of numerous papers on the pharmacology of new drugs.—Dr. Consiglio, *privat-docent* of physiology in Palermo.—Dr. A. Le Roy, formerly surgeon to the Rouen hospitals.—Dr. Karl Wernicke, professor of mental diseases in Halle, and author of many papers and several large works on the brain and its pathology. He was 57 years of age. The cause of death was a bicycle accident which he met with in the Gerathal.—Dr. Georg Mayer, the well-known Aix-la-Chapelle physician, at the age of 80 years.—Dr. von Hüttenbrenner, formerly director of the Karolin Hospital, Vienna.—Dr. Feodor Zavarikin, late professor of histology and embryology in the St. Petersburg Military Medical Academy.—Dr. August von Wegner, Surgeon-General in the Prussian Army and for many years body physician to the Empress Frederick.

Medical News.

UNIVERSITY OF OXFORD.—Dr. James Ritchie, M.A., B.Sc., Fellow of New College, Reader in Pathology, has been constituted Professor of Pathology so long as he holds the aforesaid readership.—At examinations held recently the following candidates were successful:—

FIRST M.B. EXAMINATIONS.

Organic Chemistry.—H. O. S. Gibson, New College; G. D. Knox, Balliol; G. E. Neligan, Exeter; H. W. Scott-Wilson, Queen's; W. W. Wagstaffe, New College; and R. O. Ward, Queen's.

Materia Medica and Pharmacy.—P. P. Andrews, University; D. C. Dobell, Christ Church; G. E. Downs and H. J. Fry, Magdalen; H. E. Gibson, Queen's; G. H. Hunt, Christ Church; G. J. Z. Jessell, University; G. E. Neligan, Exeter; R. P. Newsholme, Balliol; J. A. Noble, Queen's; E. W. M. H. Phillips, Jesus; and T. S. Wright, Brasenose.

Human Anatomy and Human Physiology.—M. B. Bates, St. John's; A. W. Burnyeat, Queen's; G. D. Carpenter, New College; C. D. H. Corbett and G. H. Crosfield, University; G. R. Girdlestone and S. Hartill, New College; B. G. Klein, Christ Church; and T. R. Walker, Hertford.

SECOND M.B. EXAMINATIONS.

Forensic Medicine and Hygiene.—H. H. Baker, University; H. A. Barnes, Keble; G. E. Berkeley-Hill, Trinity; L. T. Burra, University; P. J. Dear, New College; J. S. C. Douglas, Christ Church; E. L. Farncombe and J. H. Hebb, St. John's; R. Jamison, Trinity; R. C. Jewesbury, Christ Church; G. A. Jones, Magdalen; S. Nockolds and L. J. J. Orpen, Keble; C. J. Pinching, St. John's; J. G. Priestley, Christ Church; C. A. Smallhorn, Wadham; B. H. Spilsbury, Magdalen; H. G. F. Spurrell, Merton; and H. C. Squires, Hertford.

Pathology.—H. H. Baker, University; C. Beards, Jesus; H. B. Billups, Worcester; H. H. Carleton, Keble; D. Davidson, Brasenose; J. S. C. Douglas, Christ Church; E. L. Farncombe, St. John's; G. M. Johnson and G. A. Jones, Magdalen; O. G. F. Luhn, Christ Church; S. Nockolds, Keble; C. J. Pinching, St. John's; H. B. Ramsbotham, Brasenose; H. S. Souttar, Queen's; H. C. Squires, Hertford; A. S. J. Thompson, Queen's; and A. P. Yonge, Exeter.

Medicine, Surgery, and Midwifery.—H. A. Barnes, Keble; E. L. Farncombe and J. H. Hebb, St. John's; R. Jameson, Trinity; R. C. Jewesbury and J. G. Priestley, Christ Church; C. A. Smallhorn, Wadham; and B. H. Spilsbury, Magdalen.

MASTER IN SURGERY.

A. C. Goodwin, B.M., Keble; and O. W. Richards, B.M., New College.

UNIVERSITY OF CAMBRIDGE.—At the final congregations of the term, held on June 20th, the honorary degree of LL.D. was conferred on the Right Hon. Earl Cromer, in the presence of H.R.H the Duchess of Albany, and the following were admitted to medical degrees:—

M.D.—F. J. Lidderidale, Trinity; and F. J. Child, Christ's.

M.B.—D. V. Cow, Trinity; T. J. Faulder, Clare; R. E. G. Gray, Pembroke; G. L. Crimp, Caius; H. Spurrier, Caius; and R. A. Clapham, Emmanuel.

B.C.—W. G. Howarth, King's; R. E. G. Gray, Pembroke; H. Spurrier, Caius; and E. Lloyd, Emmanuel.

During the academical year just closed 30 M.D. degrees, six Sc.D. degrees, two M.C. degrees, 62 M.B. degrees, and 59 B.C. degrees were conferred.—On June 27th the University of Durham held a convocation in the Castle Hall, at which the degree of Doctor of Civil Law, *honoris causâ*, was conferred on Dr. Donald MacAlister, St. John's College, President of the General Medical Council. Dr. MacAlister was presented to the Warden and Proctors by Sir George Philipson, Caius College, professor of medicine in the University of Durham.

UNIVERSITY OF LEEDS.—A congregation of the University was held in the town hall on July 1st, when certain degrees were conferred by the Vice-Chancellor on associates of the Yorkshire College and on other students who, having attended complete courses of studies in the Yorkshire College, had graduated in Victoria University or in other universities of the United Kingdom. In the latter category degrees in medicine were conferred on the following:—

Doctor of Medicine.—Edward Turton, M.D. Vict.

Bachelor of Medicine.—George Lee Wells, M.B., B.S. Lond., Alfred Featherstone Kellett, M.B. Cantab., Arthur Manknell, M.B. Lond., Stephen Leonard Butterworth Wilks, M.D., B.S. Lond., Douglas Seaton, M.B. Vict., Ralph Hopton, M.D., B.S. Lond., Charles William Eames, M.B., C.M. Edin., John Broadley, M.B. Lond., Francis Darlow, M.B. Vict., Alexander Mackenzie, M.A., M.B., B.C. Cantab., Charles Herbert Moorhouse, M.B. Vict., Harry Stansfield, M.B Vict., William Jenkins Webb Anderson, M.B. Vict., Charles Henry Greenwood, M.B. Vict., John Arthur Reed, M.B. Vict., Ernest William Spink, M.D. Lond., Charles Rudolph Williams, M.B. Vict., Henry Brown, M.B. Vict., William Atkinson Stott, M.B. Vict., Robert George Macdonald Ladell, M.B. Vict., Leonard Ralph Braithwaite, M.B. Vict., Harry Maffin M.B. Vict., Crawfurd Tait Matthews, M.B. Vict., Frederick Percy Hewetson Birtwhistle, M.B. Vict., Wilfred Edward Brierley, M.B. Vict., Edward Cundall, M.B. Vict., Arthur Maslen Deane, M.B. Vict., Frederic William Marshall Greaves M.B. Vict., Frederick William Hayes, M.B. Vict., James Huntly Legge, M.B. Lond., Herbert James Macvean, M.B. Vict., Bertram Suggit, M.B. Vict., Herbert Tomlin, M.B. Vict., and William Herbert Smailes, M.B. Lond.

Among those degrees conferred on the results of examinations of the University was the following:—

Doctor of Medicine.—Arthur Stanley Parkinson.

On June 30th degrees were conferred by the Vice-Chancellor on the heads of certain departments and on certain members of the staff of the General Infirmary at Leeds which is closely associated in its work with the University. Among these the following were conferred:—

Master of Science.—C. J. Wright, M.R.C.S. Eng., William Bevan Lewis, M.R.C.S. Eng., L.R.C.P. Lond., W. H. Brown, F.R.C.S. Irel., M.R.C.S. Eng., Harry Littlewood, F.R.C.S. Eng., and H. Secker Walker, F.R.C.S. Eng.

The written examinations for degrees in medicine and surgery will begin on July 10th and the practical and *viva voce* examinations on the 13th. Degrees will be conferred by the Vice-Chancellor on July 22nd.—By resolution of the Court the degree of M.D. was conferred *in absentiâ* on William Walter Stoney, M.D. Vict., residing at Kimberley, South Africa.

FOREIGN UNIVERSITY INTELLIGENCE.—*Baltimore (Johns Hopkins University):* Dr. W. S. Thayer has been appointed to the chair of Clinical Medicine.—*Bologna:* Dr. Crisafulli of Naples has been recognised as *privat-docent* of Mental Diseases.—*Breslau:* Dr. Bernhard Heile has been recognised as *privat-docent* of Surgery.—*Clausenberg:* Dr. Elemer Veress has been recognised as *privat-docent* of Physiology and Dr. Julius Filep as *privat-docent* of Hygiene.—*Giessen:* Dr. O. Frank of Munich has been offered the chair of Physiology with the Directorship of the Physiological Institute as successor to the late Professor Eckhard.—*Göttingen:* Dr. Birnbaum has been recognised as *privat-docent* of Gynæcology.—*Königsberg:* Dr. R. Stich of Nürnberg has been recognised as *privat-docent* of Surgery. Dr. Berthold, Extraordinary Professor of Laryngology and Otology, is about to resign.—*Munich:* Dr. Karl Hörmann has been recognised as *privat-docent* of Gynæcology.—*Odessa:* Dr. Sadowski of St. Petersburg has been appointed to the chair of Gynæcology.—*Paris:* Dr. Wertheimer of Lille and Dr. Yersin of Paris have been elected Corresponding Members of the Paris Academy of Medicine.—*Prague (Bohemian University):* Dr. Kamil v. Lhotak has been recognised as *privat-docent* of Pharmacology.—*Rostock:* Dr. Brüning of Leipsic has been recognised as *privat-docent* of Children's Diseases.—*Vienna:* Dr. Anton Brosch has been recognised as *privat-docent* of Pathological Anatomy; Dr. Otto Ritter v. Fürth as *privat-docent* of Medical Chemistry; and Dr. Otto Marburg as *privat-docent* of Neurology.

THE RUSSIAN CENSOR AND MEDICAL LITERATURE.—In view of the extraordinary difficulties put in the way of the publication of the report of the Pirogoff Congress and of the *Journal of the Pirogoff Medical Society* by the censor, the *Novoe Vremya* states that the managers of these two

publications have issued a notice explaining the necessity of suspending the publication of the report and of the journal till better times arrive for the Russian press.

BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—The annual meeting and dinner of this association will be held on Thursday, July 13th, at 7 o'clock, at the New Gaiety Restaurant, Strand, London. Members desirous of attending are requested to notify the honorary secretary, Dr. F. H. Edwards, Camberwell House, London, S.E.

THE LEAGUE OF MERCY.—On July 1st, at the invitation of the Prince and Princess of Wales, a garden party was held at Marlborough House in connexion with the League of Mercy. While the majority of the guests, who included the presidents, lady presidents, vice-presidents, and members of the league, were assembling in the grounds a meeting was held in the drawing room of Marlborough House when the report of the year was presented. The Prince of Wales said:—

I am much gratified to learn from the report that another most successful year has been completed and that the large sum of £14,000 has been handed over to King Edward's Hospital Fund. This makes a total contribution of £46,000 during the five years that the league has been in existence. This steady increase is, indeed, most satisfactory and I am well aware that such results could not have been attained without much personal trouble and sacrifice of time on the part of the members of the league. The Princess desires me to express her regret that she is unable to be present and in her name, as well as in my own, I desire once more to thank you for the splendid work you have done on behalf of the league.

The meeting then adjourned to the gardens where the Prince, accompanied by Prince Edward and Prince Albert, presented the badge of the Order of Mercy to those ladies and gentlemen who had been awarded this honour for their work on behalf of the league. During the afternoon the band of the Royal Marines played a selection of music and refreshments were served at a buffet which had been specially erected to meet the needs of the 1000 guests who had received invitations.

MIDDLESEX HOSPITAL.—A special court of governors of this hospital was held on June 30th under the presidency of the Duke of Northumberland to consider the notification from the King Edward's Hospital Fund for London that no grants would be made from the King's Fund to any hospitals which make payments to their medical schools out of general funds subscribed for the relief of the sick poor. The Duke of Northumberland pointed out to the governors that the welfare of the sick throughout the whole land and the character of the medical profession would be affected by their decision on the connexion between the medical schools and the hospitals and the training which those schools could afford to give their students. Sir Richard Douglas Powell proposed a motion that it was the desire of the special court of governors that the medical school of Middlesex Hospital should be maintained and that such assistance as might be required for that purpose should be provided by the hospital or by a special fund raised for the purpose. This was seconded by Mr. Henry Morris who urged the desirability of starting a separate fund for medical education. The motion was then put to the meeting and was carried unanimously. Immediately after this Lord Derby proposed a motion authorising the hospital authorities to set aside out of the annual subscriptions such sums as might from time to time be required to effect the maintenance of the medical school and that as evidence of such authority the subscribers to the hospital should be asked and recommended to sign and to return to the hospital a form drawn up for that purpose. Lord Derby spoke for a short time in support of his proposition and contended that the hospital reaped benefit from the services of the medical students. The hospital and the medical school worked together for the advancement of medical skill and for the relief of suffering, and in that way were inseparably connected. Lord Cheylesmore, in seconding the motion, asserted that if the medical school were abolished the expenses of the hospital would be increased. The 504 governors of the hospital had been circularised and only five refusals had been received from governors who declined to join in the proposed scheme for setting aside out of the annual subscriptions such sums as might be necessary for the maintenance of the medical school. This motion, on being put to the meeting, was carried unanimously, and the proceedings terminated with a formal sanction being given for a sum of money to be expended in improvements connected with the operating theatre.

MEDICAL BARRISTERS.—On July 5th five medical men were called to the Bar on "call night" of Trinity term at the four Inns of Court. Harold Coates, M.D., D.P.H. Vict., and John Francis Butler-Hogan, M.D. Brux., D.P.H. Cantab., LL.B., were students at Gray's Inn; Frederick Sherman Toogood, M.D. Lond., at the Middle Temple; James Scott Tew, M.D. Durh., D.P.H. Cantab., at the Inner Temple; and William Robert Bryett, M.D. Lond., at Lincoln's Inn.

THE Odessa correspondent of the *Novoe Vremya* announces that the dean of the medical faculty of the Novorossisk University, Podvisotzki, has been appointed director of the Imperial Institute of Experimental Medicine.

DONATIONS AND BEQUESTS.—By the will of Catherine, Countess of Stamford and Warrington, £500 are bequeathed to the General Infirmary, Leicester, in aid of the Children's Hospital; £200 to the Queen's Hospital, Birmingham; and £200 to the General Hospital, Birmingham.—Mr. Wyndham Francis Cook of Cadogan-square, a partner in the firm of Messrs. Cook, Son, and Co., of St. Paul's Churchyard and of Manchester, has bequeathed £25,000 to any central hospital fund in such proportions as his executors shall deem fit (of this sum £12,500 have been already given to the Metropolitan Hospital Sunday Fund), and £1000 to the Royal Ophthalmic Hospital, Moorfields.—Under the will of Miss Clara Maud Petter, of Lee-holme, Bournemouth, the Royal Victoria Hospital at Bournemouth and the North Devon Infirmary at Barnstaple each receives £500. The Royal Hospital for Incurables receives £300.—Mrs. Mary Ada Mocatta has bequeathed by her will £300 to University College Hospital and £200 each to the London Hospital, St. Mary's Hospital, the Metropolitan and National Nursing Association, and Guy's Hospital.

CIVIL HOSPITALS AND DISPENSARIES OF THE UNITED PROVINCES (INDIA).—The inspector general of civil hospitals of the United Provinces, Colonel C. H. Joubert, I.M.S., in his triennial report, dated 1905, dealing with the years 1902–04, points out that relaxation of the provincial rule by which a civil surgeon lost his lien on the civil station from which he took furlough has been followed during the years 1903 and 1904 by the excellent result that a considerable proportion of the senior officers holding good appointments have taken long furlough and have had a much needed opportunity of putting themselves in line with modern progress in Europe. It is essential for medical officers, however good they may be, to see as often as possible the work of other men in England. The rule formerly in force in the United Provinces was a fatal bar to this. On Jan. 1st, 1902, there were 485 hospitals and dispensaries of all classes open; on Dec. 31st, 1904, there were 508. This represents a net gain during the three years under review of 23 institutions. During the year 1904 13 new dispensaries were opened and five were closed. A Government order criticising the report is appended and in it the Lieutenant Governor "desires to acknowledge the energy and zeal displayed by Colonel Joubert in stimulating the medical progress of the province and the ready help and coöperation which has been afforded to him by civil surgeons. In particular the thanks of the Government are due to Colonel Joubert for the great interest which he has taken in the Agra medical school."

SUSSEX COUNTY HOSPITAL: STEPHEN RALLI MEMORIAL.—The opening and dedication of the bacteriological and pathological laboratory with which the Sussex County Hospital has been endowed by Mrs. Stephen Ralli as a memorial of her late husband took place at the hospital on June 29th. Despite the wet weather the marquee erected adjoining the laboratory was crowded. The memorial laboratory is situated in a two-storey block within a few yards of the hospital and comprises five rooms. On the ground floor is the preparation room facing the entrance; on the left of the entry is the chemical room from which access is gained by a swing door to the bacteriological room and the pathologist's room. The bacteriological room measures 19 feet 2 inches by 11 feet 7 inches, is well lighted on the east and south, and has a teak bench for four workers on the south and a slate bench on the north for embedding oven, microtomes, water blast, incubators, &c. The chemical room is 12 feet 7 inches by

23 feet 1 inch high and has teak benches, burette shelf, hot and cold water, gas, electric light, a fume cupboard, centrifuge, &c., and is well stocked with chemicals and glass ware. On the second floor is placed the photographic room. The block includes also the hospital post-mortem room and lecture room which form together a complete pathological institute. The pathological institute is intended for the clinical and pathological research of the hospital and is available to all medical practitioners at the usual fees. It thus can assist materially in the detection, prevention, and treatment of disease.

CENTENARIANS.—Mrs. Metherell of Tavistock, Devon, on May 24th celebrated the 101st anniversary of her birth.—Mr. John Bennett of Bradworthy, Devon, died on May 26th. He was a churchwarden of the parish church up to within a month of his death and the church register shows that he was baptised on May 6th, 1805.—In the *Times* of June 20th the Brussels correspondent stated that a Belgian lady, Madame Rolland of Seneffe, completed her 104th year on June 12th. She is credited in Belgium with being the only surviving witness of the battle of Waterloo.—Mrs. Mary Parsons of Enmore Green, Shaftesbury, Dorset, died on June 18th at the age of 104 years.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at 6, Suffolk-street, Pall Mall, London, on June 29th, when Dr. F. H. Champneys occupied the chair. The first business on the agenda was the consideration of a communication from the Breconshire county council transmitting a report and scheme on the administration of the Midwives Act dealing more particularly with the details concerning the local administration of its provisions. The Board directed its secretary to thank the Breconshire county council for the report and scheme. The next question before the Board was with regard to the number of examinations for midwives to be held during the year by the Central Midwives Board. On this subject a memorial had been sent from the committee of the Queen Victoria Jubilee Institute for Nurses protesting against the recent decision of the Board to hold four examinations in the year instead of three and asking the Board to reconsider its decision. A memorial was received to the same effect from the executive committee of the Association for Promoting the Training and Supply of Midwives and a letter to the same purport was sent to the Board from the warden and matron of the Salvation Army Maternity Hospital. This matter was considered at some length by the Board and it was finally decided that all the institutions concerned in the question of examinations should be informed that the Board proposed to hold a conference with them on the subject on July 29th.

CONVERSAZIONE AT KING'S COLLEGE, LONDON.—A conversazione was held at King's College, London, on June 29th, and the spacious buildings of the institution were filled with interested guests who thoroughly enjoyed the various entertainments that were provided for their amusement and instruction. In the grand entrance hall the principal of the college and Mrs. Headlam, with the deans and members of the staff, received the visitors on arrival. An organ recital in the chapel by Professor J. E. Vernham rewarded those who came early and this was followed by a lantern exhibition in the architectural class room. At the same time demonstrations were given in the electrical engineering laboratory and in the geological laboratory there was a lantern exhibition of reptiles from the Trias. There was a band in the entrance hall and another on the terrace for those who were not attracted by the exhibits in the museum and there were concerts in the large hall, followed by a dramatic entertainment which drew a large audience. On the second floor of the building in the physiological laboratory the microscopical preparations exhibited by Professor W. D. Halliburton and Dr. H. W. Lyle were carefully studied by a great number of those present. In room No. 27 Dr. C. S. Myers exhibited apparatus for the measurement of sensory acuity. The particular apparatus that seemed to astonish the visitors most was that known by the name of the Muller-Lyer illusion In room No. 29 Professor Herbert Jackson and Mr. Northall-Laurie were kept busily engaged showing the results of experiments of crystallisation under polarised light and demonstrating the differences between the various systems of crystals. In the opinion of Professor Jackson the value of using polarised light with the microscope was worthy of more attention from a medical point of view. The authorities had provided a large number of stewards who supplied visitors with information of all kinds and those concerned in the management of this conversazione must be congratulated on the very successful results of their efforts.

VACCINATION GRANT.—Mr. J. D. Staple, public vaccinator for the Ashley district of the Bristol Union, has been awarded the grant for successful vaccination by the Local Government Board for the fifth consecutive year.

RUSSIAN REPRESENTATIVES AT THE LISBON CONGRESS OF MEDICINE.—The Military Medical Academy having been invited to take part in the International Congress of Medicine to be held in Lisbon next year has selected Professor G. E. Rein and Professor I. P. Pawlow to attend as its representatives.

BRITISH DENTAL ASSOCIATION.—The central counties branch of the British Dental Association held its annual meetings in Leicester on June 30th and July 1st. At the annual dinner on Friday evening, which was attended by a number of local medical men, Mr. W. E. Harding (Shrewsbury), in replying to the toast of "The Association," expressed the hope that the dental profession would, by the help of the British Medical Association, shortly succeed in getting the Dental Act amended. No doubt there would be opposition encountered from some quarters but by hard, persistent work they ought to succeed. Mr. A. T. Hilder, the outgoing President, also replied to the toast. Mr. H. R. F. Brooks (Banbury), in submitting the toast of "The Medical Profession" said that the Bill for the amendment of the Dental Act was of the greatest possible importance, and no effort should be spared to get it through Parliament. The British Dental Association, which was formed on similar lines to the British Medical Association, had striven persistently for the uplifting of the profession. Mr. G. C. Franklin, the President-elect of the British Medical Association, said he thought that the great danger to both his own and the dental profession was the number of men joining them of inferior education. He hoped before long to see more stringent regulations with regard to the early examinations. When they obtained these both professions would benefit by having their ranks strengthened by the inclusion of a better stamp of men—men who had passed through the universities and held university degrees. Dr. F. M. Pope also replied, paying a tribute to the great assistance which the dental profession rendered to the medical profession.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.—The annual dinner of the Poor-law Medical Officers' Association of England and Wales was held in the Oak Room of the Trocadéro Restaurant, London, on June 27th, Surgeon-General G. J. H. Evatt, the President of the association, being in the chair. The annual general meeting of the members took place just before the dinner and the report of the council for the year described how endeavours had been made to further the interests of Poor-law medical officers, including public vaccinators. At the end of last year an attempt was made by a London board of guardians to appoint a medical superintendent to a workhouse infirmary with a salary to include vaccination fees, but in consequence of the representations made by the council of the association the Local Government Board refused its sanction to the proposed arrangements. Among other cases dealt with by the council there was one in which duties were sought to be imposed on a district medical officer contrary to the Poor-law Orders; in a second an attempt was made by a certain board of guardians to elect its medical officers annually so as to take away all security of tenure. In a third case a serious complaint had been made against a district medical officer to the Local Government Board. Upwards of 50 new members had joined the association during the past year. After the usual loyal toasts Mr. Andrew Clark proposed "The Poor-law Medical Officers' Association." He said that the association had lasted more than 100 years and showed how the discussions at the meetings of members tended to the public good. Dr. Major Greenwood, the honorary secretary, in responding, drew a harrowing picture of the hardships endured by the Poor-law medical officers in out-of-the-way districts. He contended that salaries should be raised and urged the members to stand up for their just rights, recognising at the same time that their common well-being was inseparably connected with the welfare of the poor. The

toast of "The Guests" was proposed by the President and was replied to by Sir Walter Foster, M.P., who pointed out that to secure the desired reforms it was necessary for the medical men concerned to combine and observed that the want of unity among the units of the profession must be remedied. Sir William Collins also responded to the toast and said that he looked forward to the Poor-law regulations being brought into line with the modern spirit of the local government of this country. Dr. H. R. Crocker was then called upon to reply to the toast and after he had done so, Mr. D. B. Balding submitted the toast of "The President," which was suitably acknowledged.

VAGRANCY AND THE SPREAD OF INFECTIOUS DISEASE.—The conference held in November last at Spring-gardens appointed a committee, consisting of representatives of county councils, county borough councils, and metropolitan authorities, to give practical effect to the resolutions adopted by the conference. The committee forwarded the resolutions adopted by the conference to the various associations of local authorities and resolutions endorsing the majority of the decisions of the conference have been received from the associations of municipal corporations and of metropolitan borough councils, and the Association of Poor-law Unions of England and Wales. The County Councils' Association has referred the resolutions to the various county councils but no decision has as yet been arrived at by the association. On June 22nd a deputation, consisting of the committee of the conference and representatives from the Association of Poor-law Unions, was received by the President of the Local Government Board at the House of Commons. The deputation was introduced by Sir Walter Plummer, M.P. Alderman H. W. Newton of Newcastle-upon-Tyne submitted the resolutions adopted by the conference and those adopted by the associations already mentioned. He urged that legislation to give effect to the views of the conference should be promoted at an early date. The Mayor of Wandsworth (the Rev. J. H. Anderson) spoke on behalf of the metropolitan authorities and Dr. J. Milson Rhodes on behalf of the county councils. At the conclusion of the latter's remarks Mr. Gerald Balfour, who gave the deputation a most sympathetic reception, invited all those present to express their views on the question.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION OF MEMBERS OF COUNCIL.

THE election of Fellows to fill the vacancies in the Council of the College under the new regulations was held at the College, Lincoln's Inn Fields, on Thursday, July 6th, between 2 P.M. and 4 P.M.

The result of the voting was as follows:—

	Votes.	Plumpers.
MR. EDMUND OWEN	512	22
MR. GOLDING-BIRD	480	73
MR. R. J. GODLEE	471	6
MR. W. HARRISON CRIPPS... ...	373	87
MR. ANDREW CLARK...	315	16
MR. W. BRUCE CLARKE	66	2

Mr. Owen, Mr. Golding-Bird, Mr. Godlee, and Mr. Harrison Cripps were elected members of Council.

It will be remembered that Mr. Bruce Clarke withdrew his candidature.

Mr. Willmott Evans and Mr. H. J. Price of Maldon acted as scrutineers.

760 Fellows voted by post and 12 voted personally; 3 proxies arrived too late and 3 voting papers were spoiled.

Parliamentary Intelligence.

HOUSE OF COMMONS.

WEDNESDAY, JUNE 28TH.

Experiments upon Animals.

MR. MACDONA asked the Secretary of State for the Home Department whether he was aware of the increase in the number of experiments by vivisectors upon animals this year over last year, the numbers being 32,562 in 1905, as against 19,084 in 1904, being a total increase of 13,478; and whether, in view of this increase, he would take steps to reduce this number.—Mr. AKERS-DOUGLAS answered: I am of course aware of the increase pointed out by the honourable Member. The particulars on pages four and five of the Annual Return show that this increase is almost wholly in the experiments included in Table IV. (B), i.e., experiments of the nature of simple inoculations or hypodermic injections and a very large proportion of those experiments were performed on behalf of official bodies. The progressive rise in the total number of experiments in recent years has been due almost entirely to the constantly increasing importance attached by the public and by public authorities to experiments upon animals as a means of obtaining the knowledge required for the diagnosis of disease or for the prevention of disease in men and animals. It is not for me to take any action in the direction suggested. My duties under the statute are confined to seeing that the proposed experiments are conducted in conformity with the provisions of the Act.

Tuberculosis in Man and Animals.

MR. FIELD asked the President of the Local Government Board whether he could state when the report of the Bovine Tuberculosis Commission would be issued; whether his attention had been called to the statement of Dr. Koch respecting the interim report as to the absence of evidence to prove that man can be infected by animal tuberculosis in any but the very slightest degree; and whether, in view of this pronouncement, the Government would support the Tuberculosis Compensation Bill.—MR. GERALD BALFOUR replied: As I stated in my reply to the honourable Member for the eastern division of Northants on June 9th I understand that the Royal Commission hopes to issue a further interim report towards the end of the present year but that it is not possible to say at present when the final report will be issued. My attention has been drawn to the statement of Dr. Koch referred to. I sympathise with the object of the Bill mentioned in the last part of the question but I am afraid I cannot give any promise with regard to it.

THURSDAY, JUNE 29TH.

The Medical Register.

MR. WEIR asked the Secretary of State for the Home Department whether, having regard to the fact that the General Medical Council stated that during the last ten years 20 names had been struck off the Medical Register for infamous conduct in a professional respect, and that of this number four were removed on charges of adultery, he would state how many names had been removed on this charge during the current year.—Mr. AKERS-DOUGLAS replied: The answer to the question is three. I must add that the Medical Register is a matter with which I have no concern and that any other information which the honourable Member may desire would no doubt be furnished to him by the General Medical Council if he makes application to the Registrar.

Blood Poisoning in an Irish Infirmary.

MR. SAMUEL YOUNG asked the Chief Secretary for Ireland whether, considering the number of deaths in the Cootehill workhouse in January, 1904, after medical operations from alleged blood poisoning, the Local Government Board had taken any steps to ascertain the cause of death in these cases; and whether, in view of the difference of opinion by local experts as to the cause of these deaths, and that the Local Government Board inspector reported that it was difficult to assign a direct and definite cause for the outbreak in this case, he would consider the advisability of ordering a sworn inquiry before the guardians were called upon to incur heavy expenditure for structural alterations.—Mr. LONG replied: The Board's medical inspector has already made minute investigation into the cause of this outbreak of blood poisoning. Though he was unable to assign the definite cause of the outbreak he was strongly inclined to the opinion of the union medical officer that the source of infection was in the wards of the infirmary. In the opinion of the Board a sworn inquiry would not be likely to throw further light on the matter.

Allegations in an Irish Case.

MR. SAMUEL YOUNG further asked the Chief Secretary for Ireland whether he was aware that on or about June 20th, 1904, the medical officer of the Cootehill union, county Cavan, performed an operation on a patient called Fitzpatrick in the fever hospital after a local medical man who usually assisted at all such operations refused to administer ether because of the low condition of the patient; whether he was aware that the medical officer of the workhouse then called in a medical man from outside the Cootehill district, performed the operation, and the patient died a few hours after; whether the Local Government Board was informed of the facts and the cause of death in this case; and whether there was an inquest held or a sworn inquiry ordered.—Mr. LONG replied: The Local Government Board is informed by the clerk of the union that the facts are substantially as stated. The local medical man referred to did not, however, refuse to administer ether, but asked to be excused as he was not in good health. The patient died on the day following the operation. No complaint was made to the Board and no inquest or sworn inquiry was held. The medical officer who performed the operation has the reputation of being a most careful and competent surgeon and the Board sees no reason to presume that there were any circumstances connected with the patient's death which require investigation.

Infant Mortality.

MR. HERBERT SAMUEL asked the President of the Local Government Board what was the death-rate per 1000 births of infants under the age of 12 months in the urban and rural districts respectively of England and Wales.—Mr. GERALD BALFOUR answered: The best available information on this subject will be found on pages 73 and 74 of the Registrar-General's Sixty-sixth Annual Report which contains tables showing the infantile mortality: (*a*) for a group of counties that are mainly urban; and (*b*) for a group of counties that are mainly rural in character. The following particulars are taken from these tables. Infantile mortality—Deaths under one year of age per 1000 births—urban counties: average for 1898–1902, 165; 1903, 143; rural counties: average for 1898–1902, 126; 1903, 107.

MONDAY, JULY 3RD.

Tuberculosis in Fowls.

MR. MORRELL asked the President of the Board of Agriculture whether he had information to what extent this season tuberculosis was found in fowls; and whether he would cause inquiry to be made and information laid before the Commission on Tuberculosis with a view to ascertain whether that disease bore relation to that found in man and might be communicated to man in foods.—Mr. AILWYN FELLOWES answered: We have no information to show that the disease in question

is specially prevalent amongst poultry this season, but I will bring the suggestion of my honourable friend under the notice of the Royal Commission. I may add that we have prepared and issued a leaflet on the subject, with copies of which I shall be glad to supply him.

TUESDAY, JULY 4TH.

Insanitary Conditions and Fever.

Mr. WEIR asked the Lord Advocate whether he was aware that Dr. Cameron, the medical officer of health of the parish of Lochs, Island of Lewis, Ross-shire, stated in his report to the medical officer of health of the county that, being called upon to make inquiry in regard to two outbreaks of fever in the Balallan district, one of typhus and the other typhoid, he came to the conclusion that the outbreaks were due to the generally insanitary conditions prevalent; and whether, seeing that there were 108 pupils on the Balallan public school register, it was proposed to take any action to protect the lives of these children.—The LORD ADVOCATE said: I am aware that the outbreaks of fever referred to by the honourable Member are attributed to the insanitary conditions generally prevalent in the district which affect not only the children on the school register but the population at large. The matter engages the anxious consideration of the Secretary for Scotland and the Local Government Board who would be in a better position to remedy the evils complained of if the Congested Districts Amendment Bill now before the House became law.

SELECT COMMITTEE ON REGISTRATION OF NURSES.

The Select Committee of the House of Commons which is dealing with the subject of registration of nurses heard further evidence on June 27th. Mr. H. J. TENNANT presided.

Dr. ERNEST W. WHITE, professor of psychological medicine at King's College, London, chairman of the Parliamentary Committee of the Medico-Psychological Association of Great Britain and Ireland, and a member of the council of the Royal British Nurses Association, was the first witness. Examined by the Chairman he stated that the Medico-Psychological Association, which was an association of duly qualified persons interested in the treatment of the insane, had a system of registration. It granted certificates and it claimed for the holders of these certificates that they had attained a standard of efficiency and were of good moral character. They at least knew their work and the large majority of them possessed natural capacity for their work. Immense improvement had taken place in the nursing of the insane and tact, refinement, resource, and sympathy had replaced the ignorance, impatience, and brute force of former times. It was for that reason that he thought that mental nurses, male and female, should be eligible for any scheme of State registration of nurses that might be inaugurated.

The CHAIRMAN: What is the proportion of males and females amongst the 6500 persons who have passed your examination?

Witness: The registrar cannot give the precise figures to me but I should say about three-fifths of them were females.

The CHAIRMAN: You are a microcosm in yourselves of what it is suggested should be done for the whole country.

Witness: We think so.

In reply to Dr. C. F. HUTCHINSON, the witness stated that if State registration of nurses were carried out the register of his association might possibly become unnecessary. He would not go the length of saying that one year of the training of a mental nurse should be spent in a general hospital because there were excellent hospitals attached to some asylums where good training in sick nursing could be obtained.

Dr. G. E. SHUTTLEWORTH, honorary secretary of the Asylum Workers' Association, then gave evidence. Examined by the Chairman he said that the expediency of providing for the registration of nurses qualified to attend upon cases of mental disease should be considered in connexion with the general question of registration of nurses. As a rule hospital trained nurses had no experience of the special character required in mental cases. If registration were carried out, it would probably be necessary that hospital trained nurses and asylum trained nurses should appear in separate lists in the official register. Though the Asylum Workers' Association did not require any qualification for membership other than the recommendation of the medical superintendent for those in asylum service, it was the fact that about one-fourth of the members held the certificate of the Medico-Psychological Association, whilst others held certificates granted by their own asylums and a considerable number the first aid or nursing certificate of the St. John Nursing Association. It was important for the protection of the public that provision should be made for a class of private mental nurses in any scheme for the registration of nurses, because there were many unqualified or imperfectly qualified persons offering themselves as private mental nurses. The qualification for registration as a mental nurse should be at the least three years' experience in a recognised asylum where systematic training was given and the possession of the certificate in nursing of the Medico-Psychological Association or an equivalent certificate. The Asylum Workers' Association, as representing the rank and file of those in the asylum service, claimed recognition in any scheme for the government of the nursing profession which included mental nursing. The witness, however, admitted the superior claims of the Medico-Psychological Association as an examining authority.

Mr. J. PATTEN MACDOUGALL, vice-president of the Local Government Board for Scotland, was the next witness. Examined by the Chairman, he said that there had been in existence in Scotland a register of Poor-law nurses since 1885. The origin of that register was due to the fact that the Board of Supervision, which was the predecessor of the Local Government Board for Scotland, was extremely anxious to get rid of pauper nursing in the poor houses in Scotland.

The CHAIRMAN: What you call pauper nursing was that the poor nursed each other.

Witness: That is generally what it amounted to. He went on to explain that the Scottish Local Government Board had no power to compel Poor-law authorities to abandon pauper nursing and untrained nursing. However the Board was able to offer inducements in this direction to Poor-law authorities owing to the flexible conditions under which the medical relief grant was distributed. It was thus enabled to make certain payments and allowances to Poor law authorities in respect of the trained nurses whom they employed if those nurses were on the Board's list. The Board required that anyone admitted to registration should be "a trained sick nurse who should have been not less than two years in a public hospital, being a training school for nurses and maintaining a resident physician, and she must not be under 22 years of age nor over 45 when first registered."

The CHAIRMAN: The register is kept by the Board for the purpose of obtaining an efficient service of nursing for the poorhouse?

Witness: Yes, that is the object.

The CHAIRMAN: Have you found it effective from that point of view?

Witness: Yes. He proceeded to state that since 1885 there had been 773 names put upon the Local Government Board's register or an average of 36 per annum. In recent years the annual number of registrations had increased and in 1904-05 90 names were added to the register. At present 219 of the nurses so registered were in the employment of Poor-law authorities.

The committee then adjourned.

BOOKS, ETC., RECEIVED.

VIGOT FRÈRES, 23, Place de l'École de Médecine, Paris.

Les Perversions Sexuelles. XII. Fétichistes et Erotomanes. Par le Dr. Emile Laurent. Price Fr.3.50.

L'Hérédité Morbide. Par le Dr. Paul Raymond, Professeur Agrégé, Chargé de Cours de Pathologie Générale à la Faculté de Médecine de Montpellier. Price Fr.5.

WALTER SCOTT PUBLISHING CO., LIMITED, London and Felling-on-Tyne.

The New Science of Causation: Easy Duologues, Laying Bare the Hitherto Hidden, and Ensuring a General Collapse of the Foundations of Materialistic Science. By H. Croft Hiller. Price 10s. net.

WILLMER BROTHERS AND CO., LIMITED, 64 and 66, Chester-street, Birkenhead.

The Essentials of a Convenient, Comfortable, and Healthy House. By John W. Hayward, M.D., formerly Vice-President of the Liverpool Architectural Society. Price 1s.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BIRD, RICHARD KINGSTON, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Acting Officer of Health for the shire of Arapiles, Victoria, Australia.

BROWN, ROBERT LEE, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Acting Officer of Health for the shire of Cranbourne, Victoria, Australia.

LAURIE, HENRY, M.D. Melb., has been appointed Honorary Assistant Physician at the Alfred Hospital, Victoria, Australia.

LEDINGHAM, J. C. G., M.A., B.Sc., M.B. Aberd., has been appointed Assistant Bacteriologist to the Serum Department, Lister Institute, Elstree.

MORRIS, L. N., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon at the Bristol General Hospital.

OLIVER, W., L.R.C.P., L.R.C.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Coxhoe District of the county of Durham.

PARRY, LLOYD DAVENPORT, L.R.C.S. Edin., has been appointed Government Medical Officer and Vaccinator at Picton, New South Wales, Australia.

PATON, E. PERCY, M.D. Lond., has been appointed Examiner in Anatomy to the Society of Apothecaries of London.

RICHARDSON, A. G., M.B., C.M. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Rhayader District of the county of Radnor.

RICHARDSON, A. W. CECIL, M.B. Lond., has been appointed Casualty House Surgeon at the Bristol General Hospital.

RICHMOND, G. E., M.D., B.S., B.Sc. Lond., D.P.H. Cantab., has been appointed by the London County Council Resident Medical Officer to the Rotherhithe Tunnel Works.

ROSE, JOHN STUART, M.B., Ch.B. Aberd., D.P.H., has been appointed Assistant Medical Officer of Health of Penang.

SHEPPARD, A. L., M.B., has been appointed Casualty Officer at the Bristol Royal Infirmary.

SHORT, ARTHUR RENDLE, M.D., B.S., B.Sc. Lond., has been appointed House Physician to the Bristol General Hospital.

SYMES, J. O., M.D. Lond., has been appointed Physician to Clifton College, Bristol.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ARMY MEDICAL SERVICE.—40 Commissions in the Royal Army Medical Corps.

AYR COUNTY HOSPITAL.—Resident House Surgeon. Salary £70 per annum, with residence, board, and washing.

BRADFORD UNION HOSPITAL AND WORKHOUSE.—Resident Assistant Medical Officer, unmarried. Salary £100, with rations, apartments, and washing.

BRIGHTON, ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road.—House Surgeon. Salary £80, with board, lodging, and washing.

CAIRO, SCHOOL OF MEDICINE.—Assistant to the Professor of Anatomy. Also Assistant to the Professor of Pathology. Salary in each case is £E320 per annum.

CHARING CROSS HOSPITAL.—Assistant Surgeon.

DERBY, DERBYSHIRE ROYAL INFIRMARY.—Assistant House Surgeon for six months. Salary £30, with board, residence, and washing.

DORCHESTER, DORSET COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

HAMMERSMITH INFIRMARY AND WORKHOUSE, Ducane-road, Wormwood Scrubs, W.—Medical Superintendent and Medical Officer. Salary £300 per annum, with house, coals, light, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Medical Officer. Salary £200 per annum, with board and residence.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried. Also House Physician, unmarried. Also Assistant Casualty Medical Officer, unmarried. All three appointments for six months. Salaries £20, with board and residence.

HOSPITAL FOR WOMEN, Soho-square, W.—Registrar. Honorarium 25 guineas.

HULL ROYAL INFIRMARY.—Casualty House Surgeon. Salary £50 per annum, with board and lodging. Also Locum Tenens.

KENT AND CANTERBURY HOSPITAL.—Honorary Physician.

LEICESTER, BOROUGH OF, EDUCATION COMMITTEE.—Medical Officer. Remuneration £400 per annum, rising to £450.

MANCHESTER, VICTORIA UNIVERSITY.—Junior Demonstrator in Physiology. Salary £100, rising to £150 per annum.

NORFOLK AND NORWICH HOSPITAL.—Assistant House Surgeon for six months. Honorarium £20, with board, lodging, and washing.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Second Honorary Anæsthetist.

ORKNEY, PAPA WESTRY PARISH COUNCIL.—Lady Medical Officer and Public Vaccinator. Salary £75, with fees, house, and garden.

READING, ROYAL BERKSHIRE HOSPITAL.—Secretary and House Governor. Salary £200 per annum, with residence.

ST. MARY'S HOSPITAL, Paddington, W.—Honorary Anæsthetists.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon. Salary £60 per annum, with rooms, board, and washing.

SOUTH UIST (SOUTHERN DIVISION).—Medical Officer. Salary £77 10s.

STOKE-UPON-TRENT, NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—Senior House Surgeon. Salary £100 per annum, with apartments, board, and washing.

VENTNOR, ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Senior Resident Medical Officer, unmarried. Salary £200 per annum, with board and lodging.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—House Physician for six months. Honorarium of £25, with board and lodging.

WAKEFIELD, WEST RIDING ASYLUM.—Locum Tenens for six weeks. Terms £3 3s. per week, residence, board, &c.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory and Workshop Act at Wimbledon, in the county of Surrey.

Births, Marriages, and Deaths.

BIRTHS.

CAMPS.—On June 28th, at Udney-park, Teddington, Middlesex, the wife of Percy W. L. Camps, M.B., B.S., F.R.C.S., of a son.

JONES.—On July 2nd, at Claybury, Woodford Bridge, Essex, the wife of Robert Jones, M.D., of a daughter.

LEANING.—On June 22nd, at Rusthall-avenue, Bedford-park, the wife of R. Craske Leaning, M.B., B.S., M.R.C.S., of a son.

ROBINSON.—On June 28th, at Marine-terrace, Waterloo, Liverpool, the wife of G. Burton Robinson, M.B., M.R.C.S., L.R.C.P., of a daughter.

MARRIAGE.

WEDDERBURN—BANKIER.—On June 29th, at St. Paul's Church, Adlington, Lancashire, Laurence Craigie Maclagan Wedderburn, M.B., Ch.B., to Inez Amy, second daughter of W. H. Bankier, Flushing, New York, U.S.A.

DEATHS.

METCALFE.—On July 3rd, at Clifton-gardens, W., Edmund Metcalfe, F.R.C.S., in his 86th year.

SMITH.—On July 5th, at Orleans House, Regent's Park-road, N.W., Cyrus Walter Smith, L.R.C.P. Lond., M.R.C.S., the beloved and only surviving son of Walter Smith, M.D., M.R.C.P. Edin., and Susan Smith of above address, aged 32 years. Interment at Nunhead Cemetery on Tuesday, 11th inst.

WALES.—On June 27th, at Holywood, co. Down, George Frederick Wales, M.D. Aberd., F.R.C.S. Edin.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

SOME "MOTOR" NOTES FOR MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—In answer to many requests from professional friends afflicted with incipient motor fever I propose, with your permission, to reply to the many letters I have received on the subject through the medium of THE LANCET. I believe the following remarks will cover the various queries I have received. I bought my car in September, 1904, it being my fourth venture in automobiles. The car (Wolseley 6 h.p.), a two-seater, has a single horizontal engine, transmitting its power by a chain to the gear-box and from there by another chain to a live axle, to the extremity of which the driving-wheels are keyed. The engine is certainly the best I have come across. The exhaust valve-spring is a laminated one. I have had two of these break. I believe a spiral spring is less likely to fracture, but against this is the fact that they are more troublesome to replace. On my other cars, two Benz and one Brown, where these springs were of the spiral kind, I was lucky enough not to have any such trouble. A shield is fitted under the engine; this is a great protection, keeping the machinery free from mud and dust, but it has its inconveniences as it must be removed in order to replace a broken exhaust spring and as I can say from experience this is a trouble to do on the road. The seat of the exhaust spring is the lower part of the combustion chamber; it would, I consider, be better if the seat was removeable, as in the case of the inlet valve, which is easily taken out. The crank is solid and the bearings are well lubricated by sight feed lubricators. The pump is gear driven and the radiators keep the circulating water fairly cool. Convenient cocks are fitted to drain off the water in frosty weather. The carburetter is of the spray variety and acts well. The gear box is suspended from the frame by two bolts by which, too, the distance of the gear box from the fly wheel can be altered and thus the tension of the chain between these parts kept constant. The bolts originally fitted were five-sixteenths of an inch and were apt to break. On two occasions this occurred to me. I believe the makers now get stronger ones.

The clutch.—This part of the car has given me a good bit of trouble. It consists of a pan into which a leather covered cone fits, the power coming by a chain from the fly wheel to the pan. A spring keeping it pressed against the male portion by means of a pedal working a fork the female portion can be withdrawn and the engine thus thrown out of gear. The diameter of the pan is small and a medical man's work, of course, means many stoppages with resulting friction between the two surfaces. On three occasions I have been stuck up by a slipping clutch. Once when taking a patient to see a specialist in town the leather fired and we stayed for over an hour on Vauxhall Bridge before it would grip. I certainly had less trouble with the old-fashioned but now discarded belt transmission with a loose and a keyed pulley as fitted on the old 4½-h.p. Benz. Probably a larger diameter clutch would be more satisfactory.

The brakes.—The hand brake consists of two bands working on drums on the driving wheels and are actuated by a side lever and a wire cable. This cable is apt to break at the point where it bends round the lever. This once happened to me on a hill when the clutch was slipping. The experience was thrilling but luckily without disaster. My life not being insured I substituted rods for the cable, which have the additional advantage of making certain that the bands are absolutely free of the drums when off. The foot-brake, which also works a throttle, has been a source of anxiety, as when it is supposed to be off it still bears on the drum on the live axle, thus causing waste of power. When I took delivery of the car I found this drum so hot that I could not bear my hand on it, and if it is adjusted so as not to bear there is not room to bring the pedal down sufficiently low to make it act when required. Seemingly, the makers have not yet improved this defect, as on a new car I saw last week the drum after a run of only seven miles was very hot.

Ignition is of the ordinary high-tension variety, the coil being worked by a four-volt accumulator. A little attention that the connexions are clean and the commutator working freely saves much trouble and may obviate interesting a street crowd by unearthly noises due to misfires or, what is even worse, a breakdown.

Excluding the defects mentioned I believe the car to be well-suited for a medical man's work. Certainly it is a good hill climber, but the brakes and clutch could be improved with advantage.

Tyres.—Dunlop pneumatic were fitted on my car and seem to wear well. In addition I had Trosse non-skids on the driving wheels, but after a short time these bands became loose in places and present the appearance of having sebaceous cysts where the air has got in between the leathern band and outer cover.

I am, Sirs, yours faithfully,

CHARLES T. W. HIRSCH, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., Public Vaccinator and Police Surgeon, Woolwich; late Colonial Medical Service, Fiji.

Woolwich, June 28th, 1905.

ATTENDANCE ON THE CHILDREN OF MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—I should be glad of information on the following points. Are the children of a deceased medical man always entitled to free medical attendance during their lifetime; if not, how far does this custom extend? Is it usual to attend free a patient in the position of a householder or an adult, merely because his father was a doctor?

I am, Sirs, yours faithfully,

July 3rd, 1905. INQUIRER.

*** No definite rule can be laid down. Whether free attendance be given or not should, we think, depend upon the pecuniary circumstances of the patient. We do not consider that a patient is necessarily to be attended free because his father was a medical man, and certainly when the son of a medical man is the master of a house and well able to pay all the other claims upon him he should pay his medical adviser.—ED. L.

RED RUBBER.

WITH regard to the suggestion that red rubber may be a source of antimonial poisoning Aerators, Limited, of Angel-road, Edmonton, write: "There are only two washers in the 'sparklet' syphon head—one which is liable to come in contact with the water—viz., that on the bottle neck, which is purposely made in black rubber; a second which receives the neck of the bulb and makes the joint on piercing the latter—this is of red rubber, but no water comes in contact with this washer and no particles of this washer can get into the interior of the bottle." We find that this description of the sparklet bottle is correct in every particular.

Referring to the same subject Messrs. Camwal, Limited, of 112, Pembroke-street, Caledonian-road, N., state that most syphons do not contain red rubber and if they did it would be next to impossible for the rubber to get into the water. With regard to bottles, so far as mineral waters are concerned they have always been of opinion that the old-fashioned cork is the best stopper.

Messrs. Type and King, manufacturers of golden sulphide of antimony, 16, Mincing-lane, London, E.C., doubt whether the acid carbonates of soda and potash or the organic acids would have any solvent action on red antimony and state that the maximum quantity of antimony ever employed in rubber is about one-sixth of the weight of the rubber.

These remarks are in agreement with the results of analysis and experiments which we recorded in an annotation in THE LANCET of June 24th, p. 1736, to which we may refer our correspondents.

AN INTERESTING CASE OF RETENTION TO THE AMOUNT OF A GALLON.

To the Editors of THE LANCET.

SIRS,—On June 29th I was urgently sent for to see a woman, aged 25 years, a multipara. She was in great pain. The abdomen was fully distended. Absolute dulness and vibratory tremor were well marked all over the abdomen. There were bulging of the perineum and protrusion of the posterior vaginal wall. She assured me that she had passed plenty of urine. There was a history of five months pregnancy. With slight difficulty I introduced the catheter and drew off *four quarts* of urine. On vaginal examination I found an enlarged uterus retroverted and fixed; this I reduced after placing the patient in the genu-pectoral position. The interest in this case is the capacity for practically unlimited distension of the bladder. The amount drawn off was carefully verified by measuring in an imperial half-pint measure (stamped). This distension of the abdomen had only arisen within the last four or five days. The patient has since the replacement of the uterus voluntarily passed two quarts at the time, and there appears to be no disturbance in the gestation.—I am, Sirs, yours faithfully,

Mile End-road, E., July 3rd, 1905. M. CURSHAM CORNER.

WANTED—A HOME.

To the Editors of THE LANCET.

SIRS,—May I through the medium of your journal thank the many correspondents who answered my letter in THE LANCET of July 1st? There have been too many to answer personally by letter so I take this means of doing so. I am, Sirs, yours faithfully,

BERTRAM ADDENBROOKE.

Kidderminster, July 4th, 1905.

SYMPTOMS FOLLOWING THE INHALATION OF POLLANTIN.

To the Editors of THE LANCET.

SIRS,—A patient of mine purchased a tube of pollantin at a chemist's shop and started self-medication. The following are the notes of the case, which I hope you will publish in order to elicit further communications and to see if similar results have been observed by others. Or may we conclude that the symptoms in my patient could possibly be accounted for otherwise? A middle-aged gentleman had suffered for years from hay fever. He had never had attacks of giddiness. Hearing of the benefit a friend had obtained by using pollantin he determined to try it. On June 12th he started at 7 P.M. inhaling up his nostrils the quantity advised in the prospectus. At 10.30 P.M. he took a second inhalation and retired to bed. Next morning at 5.30 he awoke feeling very giddy and noticing a buzzing in the ears. The least movement of the head caused vertigo. The hay fever was checked, he said, but the feeling of giddiness was "horrible." He also noticed a dull, curious, aching feeling at the back of the head. Making an effort he dressed and later went to London. The symptoms persisted on and off all day. Coming home at 6 P.M. he stooped to pat his dog and then the vertigo became intense and he vomited. I saw him at 9 P.M.; he was on his back in bed, afraid to turn his head, and was complaining greatly of pain in the occipital region. His face looked pinched and cyanosed; his pulse was 48. The feeling of sickness passed off gradually. On the next morning I found that he had had a good night; the tinnitus had gone but he was still unable to move his head on account of the vertigo thus caused. The pulse was 54. His condition remained the same all day. Next morning he was decidedly better, able to move his head, but not able to get up because of the giddiness. The pulse was 60. Improvement was then gradual, and three days after the onset of the attack he was able to sit out of bed. He now appears to be convalescent and has had no return of the hay fever.

I am, Sirs, yours faithfully,

South Croydon, June 26th, 1905. A. PERCY ALLAN, M.D. Lond.

THE FARMHOUSE TREATMENT OF TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—I shall be glad of information from your readers as to the existence of hillside, or seaside, or country cottages or farmhouses where tuberculous patients are treated under the care of a resident nurse with occasional visits from the medical man. How does such treatment compare with proper sanatorium treatment? I should like to be put in touch with any such places and the individuals who are in charge of them. What is likely to be the comparative cost of their working? This, of course, I would like to obtain from those responsible for their maintenance. Sanatorium figures I have, as they are abundantly to be got. It is suggested locally to endeavour to deal with tuberculous cases by taking cottages or small houses in the district and running them on the lines suggested by my letter.

I am, Sirs, yours faithfully,

Rochdale, June 21st, 1905. WILLIAM STANWELL, M.R.C.S. Eng.

THE COST OF LIVING IN WEST AFRICA.

To the Editors of THE LANCET.

SIRS,—I shall be much obliged if some medical man lately returned from the West African gold-mines would tell me the cost of living per week inclusive and how long it would take to travel from the coast to the gold-fields. I am, Sirs, yours faithfully,

June 29th, 1905. ST. GEORGE QUEELY, L.R.C.P. Irel.

OLD BOOKS.

M.B. writes:—"If 'R. D.' would instruct the Church Army, Edgware-road, to call for his books they would be taken away gladly, as the Church Army can dispose of them, but the society will not purchase or give anything for them."

Eternum Nefas.—Our correspondent, writing above a pseudonym which shows him to be completely mistaken as to the circumstances, should submit his questions to a medical man. We cannot break our rule of never recommending a practitioner by name, specialist or otherwise, but we may say that any medical man will be able to give him the assistance that he wants.

C. A. M.—We do not think that it is necessary to read special monographs. Our correspondent might read Foster's Physiology in addition to the work which he mentions and we advise him to consult the article entitled "The Students' Library" which appeared in THE LANCET of Sept. 3rd, 1904.

G.P.—Why not apply directly to the principal? It is notorious that medical opinions differ, and there is really not yet enough evidence to warrant a dogmatic answer.

P. E. Giuseppe.—We regret that we cannot give the information but any medical publisher, certainly any foreign medical publisher, would be able to do so.

Ars.—In our opinion the conditions mentioned by our correspondent should be included.

ERRATUM.—In Dr. H. G. Adamson's paper on the Treatment of Ringworm of the Scalp by Means of the X Rays, published in THE LANCET of June 24th, "four" milliampères on p. 1716, col. i., line 31, should be 0·4 milliampère.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 6th, 1905.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
June 30	29·69	E.	0·35	69	69	61	62	63	Raining
July 1	29·77	S.W.	0·02	115	76	61	62	62	Raining
,, 2	30·01	S.W.	...	121	76	60	61	65	Cloudy
,, 3	30·19	W.	...	121	76	60	61	66	Cloudy
,, 4	30·19	N.E.	...	97	69	58	60	66	Fine
,, 5	30·02	N.E.	0·02	106	74	59	61	65	Cloudy
,, 6	30·00	N.	..	122	69	59	60	64	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.).

TUESDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.).

WEDNESDAY (12th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.) Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.).

THURSDAY (13th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.).

FRIDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.).

SATURDAY (15th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (11th).—SOCIETY FOR THE STUDY OF INEBRIETY (Rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, W.).—3.30 P.M. Council Meeting. 4 P.M. Discussion on the Psychology of the Inebriate (opened by Dr. T. C. Shaw).

WEDNESDAY (12th).—THERAPEUTICAL SOCIETY (Royal Botanic Society's Gardens, Regent's Park.)—Garden Meeting to view the Medicinal and Other Plants.

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—5.15 P.M. Meeting.

THURSDAY (13th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Dr. C. Maunsell: (1) A Case of Endotheliosna Uteri (illustrated by drawings and microphotographs); (2) An Improved Method of Ventrofixation of the Uterus (illustrated).—Dr. H. Macnaughton-Jones: (1) Note on Cylfin as a Post-operative Antiseptic; (2) Note on a Case of Post-operative Parotitis; (3) Note on a Case of Urethral Cyst.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (10th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. T. C. FOX: Clinique. (Skin.) 5.15 P.M. Mr. T. Walker: Some Recent Methods of Diagnosis in Urinary Surgery.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Robinson: Gynæcology.

TUESDAY (11th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. T. Williams: Clinique. (Medical.) 5.15 P.M. Dr. L. Williams: The Therapeutics of Some Common Ailments.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. S. Taylor: Cerebral Hæmorrhage.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Mr. M. Gunn: Optic Neuritis.

WEDNESDAY (12th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Berry: Clinique. (Surgical.) 5.15 P.M. Dr. J. Fawcett: Cancer of the Stomach.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Robert Jones: Prognosis in Mental Disease.

THURSDAY (13th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M. Dr. D. Sommerville: Errors of Digestion in Relation to Disease.

POST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.) 5 P.M. Mr. Baldwin: Practical Surgery.

HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Lecture:—Mr. Ballance: Demonstration on Surgical Cases.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Pitzroy-square, W.).—5 P.M. Lecture:—Mr. H. Barwell: The Diagnosis of Tuberculous Laryngitis in its Early Stage. Post-Graduate Course.)

FRIDAY (14th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. H. W. Dodd: Clinique. (Eye.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. S. Taylor: Diagnosis in Lesions of the Spinal Cord.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1905, which was completed with the issue of June 24th, and the Title-page to the Volume, were given in THE LANCET of July 1st.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1905 are now ready. Bound in cloth, gilt lettered, price 12*s.*, carriage extra.

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